Triad Engineering, Inc.

Venco Coke Fire ER

CERCLIS WVN000306095
Route 2 South
Moundsville, Marshall County, West Virginia

EXECUTIVE SUMMARY REPORT

TRIAD Project 04-05-0367

Submitted to:

West Virginia Department of Environmental Protection
Office of Environmental Remediation
601 57th Street, SE
Charleston, West Virginia 25304

Submitted by:

TRIAD ENGINEERING, INC.
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August 2006

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TRIAD

PFE ORIGINAL

August 25, 2006

Ms. Pam Hayes
Office of Environmental Remediation
West Virginia Division of Environmental Protection
601 57th Street, SE
Charleston, West Virginia 25304

SUBJECT: *Executive Summary Report*
Venco Coke Fire ER
CERCLIS Number WVN000306095
TRIAD Project No. 04-05-0367

Dear Ms. Hayes,

TRIAD ENGINEERING, INC. is pleased to submit the *Executive Summary Report* for the Venco Coke Fire ER Site, prepared under Tasks 1 and 2 of the approved Work Plan.

If you have any questions or desire additional information, please feel free to contact us.

Sincerely,
TRIAD ENGINEERING, INC.

Gary M. Hilgar, PG, LRS
Environmental Services Manager

Lydia M. Work, LRS
Project Manager/Senior Chemist

Dennis C. Chambers, PE
Senior Vice President

Cc: James Hargett, Site Assessment Manager, USEPA Region III

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ACRONYM GLOSSARY

AST	Above ground storage tank
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
COPC	Contaminant of Potential Concern
DWM	Department of Waste Management
EDR	Environmental Data Resources, Inc.
HRS	Hazard Ranking System
NFRAP	No Further Remedial Action Planned
NPL	National Priority List
NRC	National Response Center
NWI	National Wetlands Inventory
OER	Office of Environmental Remediation
OSC	On Scene Coordinator
PA	Preliminary Assessment
PAH	Polynuclear Aromatic Hydrocarbons
POLREP	Pollution Report
PRP	Potentially Responsible Party
RA	Removal Assessment
RCRA	Resource Conservation and Recovery Act
SDWIS	Safe Drinking Water Information System
SCS	Soil Conservation Service
Site	Venco Coke Fire ER CERCLIS Site
SIR	Site Inspection Reassessment
START	Superfund Technical Assessment and Response Team
TAT	Technical Assistance Team
TDL	Target Distance Limit
TRIAD	TRIAD ENGINEERING, INC.
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground storage tank
VRP	West Virginia Voluntary Remediation/Brownfields Program
WVGES	West Virginia Geologic and Economic Survey
WVGIS	West Virginia State Geographic Information Systems
WVDEP	West Virginia Department of Environmental Protection
WVDNR	West Virginia Department of Natural Resources

1.0 INTRODUCTION

1.1 Authorization

TRIAD ENGINEERING, INC. (TRIAD) received *Notice to Proceed* from the West Virginia Department of Environmental Protection (WVDEP), Office of Environmental Remediation (OER) on July 30, 2005 to perform various investigatory tasks relative to the Venco Coke Fire ER Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Site under a Pre-Remedial Cooperative Agreement between the United States Environmental Protection Agency (USEPA) and the WVDEP.

1.2 Scope of Work

The Venco Coke Fire ER Site (the Site) has Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site designation WVN000306095. The Site's current CERCLIS status is a Non-National Priorities List (NPL) Removal Only Site with no site assessment work needed.

A green petroleum coke fire due to unknown causes was first detected at a raw coke storage area at the Venco Coke Company, LLC facility on February 9, 2004. Portions of the raw coke pile that were unaffected by the fire were removed on February 10, 2004, and firefighting activities were initiated on February 11, 2004. The fire was extinguished by the evening of February 13, 2004. The final Pollution Report (POLREP) on February 16, 2004 indicated no further EPA involvement was anticipated because the fire was fully extinguished. For the purposes of this investigation, the Site includes the raw coke storage area that was affected by the coke fire incident, and excludes unaffected areas of the facility.

The USEPA Region III and WVDEP, OER determined that a Preliminary Assessment (PA) was warranted to evaluate potential risk associated with the Site and determine whether the Site should undergo further investigation under CERCLA. This *Executive Summary* Report has been prepared under Task 1 of the approved Work Plan.

Task 1 included a review of the Site files provided by the WVDEP, OER and any information made available by the USEPA. In addition, a review of all available historical aerial photographs of the Site and surrounding areas, census records, tax records, and geologic publications was performed. Additional research was conducted of listings of local community, health, and regulatory agencies that may provide information and assistance, and internet database searches.

Task 2 included a site reconnaissance to confirm information contained within the OER and USEPA project files, and to observe and document source areas and possible releases of hazardous substances. Particular attention was given to ongoing or proposed activities that may lead to potential human or ecological exposure to CERCLA contaminants.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Venco Coke Fire ER CERCLIS Site is located west of State Route 2 on the east bank of the Ohio River in the Franklin District of Marshall County, West Virginia approximately 10 miles south of Moundsville, West Virginia. The west bank of the Ohio River constitutes the border between West Virginia and the State of Ohio.

The Site location is depicted on the 1960 (Photorevised 1972 and 1976, Photo inspected 1984) *Powhatan Point, Ohio-W. VA.* 7.5-minute United States Geological Survey (USGS) topographic quadrangle map and is presented below in **Figure 1, *Site Location Topographic Map***. Coordinates for the Site are 39.8345° north latitude and 80.8202° west longitude.

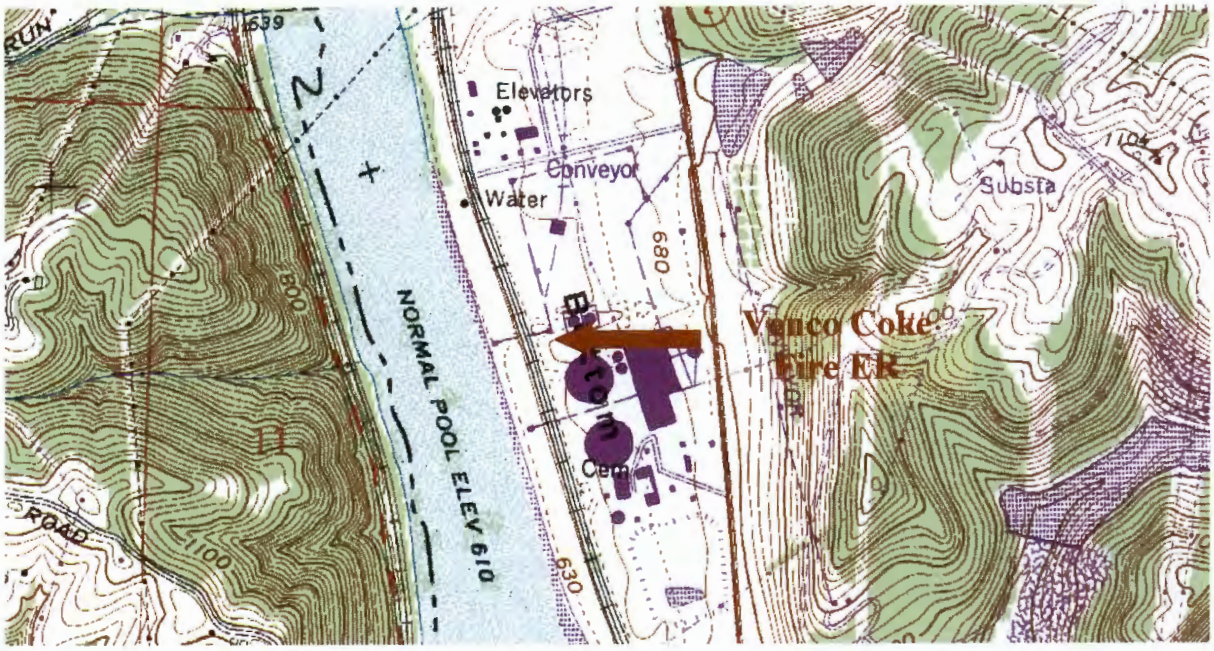


Figure 1. Site Location Topographic Map, USGS 1960, Photo Revised 1972 and 1976.

The Site is accessible via an unnamed private access road off West Virginia State Route 2.

According to Marshall County tax records available through Digital Courthouse, LLC, there are 14 land parcels owned by Venture Coke Company LLC (Venco) on Tax Maps 1 and 6 of the Franklin District. The parcels have a combined total area of 40.71 acres, and are described as "Bottom Land" or "River Bottom". CII Carbon LLC of Kingwood, Texas, subsequently purchased the Moundsville Plant and two other former Venco facilities in August 2005, and is the current owner of the Site.

2.2 Site and Vicinity General Characteristics

The Site is located in a former rural area of Marshall County, West Virginia, that has been characterized by industrial development beginning in the 1950's. The Site is a raw coke

storage area at the Moundsville Calcining Plant, which is operated for the production of calcined petroleum coke. Raw petroleum coke is manufactured from heavy crude oil fractions that are relatively high in carbon and low in hydrogen. Raw petroleum coke is calcined prior to use for various diverse industrial applications such as graphite or metallurgy. The calcination process consists of heating raw petroleum coke to drive off volatile fractions, resulting in an extremely high carbon, low volatile product (Conoco Global Carbon, www.conoco.com/products/global_carbon/; www.ciicarbon.com/prodcyc.htm CII Carbon LLC).

Current land-uses in the area adjoining and adjacent to the Site are mainly mixed industrial activities, including adjoining areas of the Moundsville Calcining Plant and the Ohio Power Company Kammer generating station to the north; Ohio Power Company Mitchell generating station immediately to the south; State Route 2 and undeveloped land traversed by power transmission line right-of-ways and surface facilities associated with underground coal mining (mainly the McElroy Coal Company McElroy Mine) to the east; and the Ohio River and adjoining areas of Monroe County, Ohio, to the west. The location of the Site and surrounding areas are presented below in a 2005 aerial photograph.

Figure 2. 2005 Aerial Photograph, Google Earth.

2.3 Current Use of the Site

The Site is currently used for raw petroleum coke storage.

2.4 Descriptions of Structures, Roads, and Other Improvements on the Site

The Moundsville Calcining Plant is accessible from State Route 2 via a private access road. The Site is proximate to the calcining plant conveyor belts and a paved access road. The Site area is surrounded by a concrete berm or barrier that contains runoff and drainage and routes it through the facility's storm water treatment system (see **Appendix 4, 2004 Coke Fire Photographs**). Various structures are present in the adjoining areas of the coke facility, including the plant, two rotary kilns; conveyor belts, silos, a rail line, and river loading area.

According to the Marshall County Health Department, public sewer service is not available to the Site and adjacent facilities in this area. Waste water at the Moundsville Calcining Plant, Mitchell Power Plant, and other adjacent facilities is treated by on site wastewater systems. Wastewater effluent is monitored quarterly at Outlet 002 under the facility NPDES Permit (WV0004642). There is a separate treatment system for the containment and treatment of storm water runoff. Storm water effluent is monitored quarterly at Outlet 003 under the above-referenced NPDES permit.

2.5 Current Uses of the Adjoining Properties

The current land-uses of the properties that are immediately adjacent to the Site are as follows:

North – The Site is bound to the north by mixed industrial activities, including adjoining areas of the Moundsville Calcining Plant and the Ohio Power Company Kammer generating station further to the north.

West – The Site is bound to the west by the Ohio River and adjoining areas of Ohio.

East - The Site is bound by State Route 2 and undeveloped land traversed by power transmission line right-of-ways and surface facilities associated with underground coal mining (mainly the McElroy Coal Company McElroy Mine).

South - The Site is bound to the south by the Ohio Power Mitchell generating station.

3.0 RECORDS REVIEW

TRIAD obtained and reviewed various standard and additional environmental records and historical use information that were reasonably ascertainable and available to help identify potential recognized environmental conditions at the Venco Coke Fire ER Site.

3.1 Standard Environmental Database Review-Federal and State

TRIAD contracted with Environmental Data Resources, Inc. (EDR) to provide both standard and additional environmental records from Federal, State, and local databases to obtain information regarding potential recognized environmental conditions within search distances of up to one mile of the Venco Coke Fire ER Site. The EDR database report is included as

Appendix 1, *EDR Radius Map with GeoCheck®*. The government records reviewed by EDR are listed in Pages 4 and 5 of **Appendix 1**.

There were seven listings found in EDR's search of reasonably ascertainable government records either on the Site or within the search radius of one mile around the Site Property. Six of the listings involved the Venco Coke Moundsville Plant facility. The subject Site (Venco Coke Fire ER) was listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) as a Removal Only Site, with no site assessment work needed. The Removal Assessment completion was listed as February 16, 2004. Adjoining areas of the Moundsville Calcining Plant were listed on the Toxic Substances Control Act (TSCA) database (two separate listings); Toxic Release Inventory System (TRIS) database; West Virginia Underground Storage Tank database (four registered UST's currently in use, three UST's previously removed); and Resource Conservation and Recovery Act Information (RCRA), Facility Index System/Facility Registry System as a Conditionally Exempt Small Quantity Generator. There was one listed RCRA violation dated April 18, 2001 that was listed as a "Verbal Informal" enforcement action. There is no available information indicating that this incident impacted the Site.

An additional 43 "orphan" sites were identified in various databases. However, due to poor or inadequate address information these "orphan sites" could not be mapped by EDR. Based on our site reconnaissance activities and review of available mapping, the majority of these listings were determined to not be immediately proximate to the Site, with no evidence that these orphan sites would impact the Site. The one exception was the listing of the Ohio Power Mitchell Plant, which is adjacent to the south. Despite the proximity, there is no direct evidence that activities at the Mitchell Plant could adversely impact the Site.

3.2 Physical Setting

3.2.1 Topographic Information

The Site is within the Ohio River watershed. Based on review of the *Powhatan Point, Ohio-W. VA.* USGS 7.5-minute topographic quadrangle map and site reconnaissance activities, the slope of the Site is gently sloping to the west/southwest toward the Ohio River. The Site is approximately 650-660 feet above mean sea level (MSL).

The Site topography is likely indicative of groundwater flow direction. As a result, groundwater flow at the Site would be expected to be west toward the Ohio River.

Surface water runoff at the Site is collected into a concrete storm water retention basin and discharged to the Ohio River through Outlet 003. The outlet is monitored quarterly under the facility NPDES permit (WV0004642). According to the EDR database report is included as **Appendix 1**, the Site is within the 500-year floodplain of the Ohio River.

3.2.2 Soil Characteristics

Based on the United States Department of Agriculture, Soil Conservation Service (SCS) *Soil Survey of Marshall County, West Virginia*, native soils at the Site belong to the Wheeling-Huntington association consisting of nearly level soils on terraces

and flood plains of the Ohio River. The Site appears to originally have been in a transitional area between the Wheeling sandy loam, 3 to 10 percent slopes (Wn) and Huntington silt loam, 0 to 3 percent slopes (He). The Wheeling series soils are deep, well-drained soils developed on water-laid sand and gravel, and are characterized by moderate to moderately rapid permeability. The Huntington soils are deep, well-drained bottom land soils developed from recent alluvium. They are dominantly silt loams with generally moderate permeability. The construction of the Moundsville Calcining Plant and the adjacent Mitchell power plant has most likely resulted in severe disturbance and/or burial of the original native soil profiles associated with the Site.

3.2.3 Geologic Setting

Based on the West Virginia Geological and Economic Survey, *Geologic Map of West Virginia* (1968), the Site is underlain by Quaternary alluvial terraces along the Ohio River. Available records indicate the alluvium may be up to 80 to 100 feet thick in the vicinity of the Site. The alluvial deposits are underlain by rocks of the Pennsylvanian Monongahela Group, which consist of alternating sequences of sandstone, shale, thin limestones, and coal. The Pittsburgh coal, which lies at the base of the Monongahela Group and is approximately 150 feet in elevation beneath the Site, has been extensively mined locally by underground methods, but is unmined beneath the Site. Areas at higher elevations to the east are capped by the Permian Dunkard Group, which consists of alternating sequences of sandstone, siltstone, shale, limestone, and thin coals.

3.2.4 Wetlands

Based on information provided by EDR in the environmental database records review, no National Wetlands Inventory (NWI) wetlands are present at the Site. EDR accessed the United States Fish & Wildlife Services 2002 NWI to identify mapped "Federal Wetlands." A thin strip of riparian wetland area along the east bank of the Ohio River is shown approximately one-eighth mile west of the Site. The current US Fish and Wildlife Service Wetlands Mapper, which is accessible at http://wetlandsfws.er.usgs.gov/wtlnds, also indicated no mapped wetlands at the Site.

3.2.5 Water Wells and Public Water Supply Systems

The location of water wells and public water supply systems was determined by an EDR database search, searching the USEPA Safe Drinking Water Information System (SDWIS) internet database, and published literature. The well search report provided by EDR identified seven groundwater wells in the USGS database that are located within one-mile of the Venco Coke Fire ER Site. Two of the wells are over 0.5 miles to the north of the Site, three wells are over 0.5 miles to the south, and two of the wells are in close proximity (<0.25 mile) to the Site. Aerial photograph and topographic map review indicate a lack of residences in this area, such that it is unlikely that any of these wells were used for residential purposes. It appears that some of the USGS well locations may correspond with supply wells inventoried by the West Virginia Health Department described below, but has not been confirmed. No groundwater level measurements were reported in the EDR records search.

Records for three wells located in the vicinity of the Site along Cresap Bottom are available in the *Geology and Economic Resources of the Ohio River Valley in West Virginia* (West Virginia Geological Survey, 1956). Wells 4-7-27, 4-7-28, and 4-7-29 lie at surface elevations of 660 to 670 feet above MSL. Wells 4-7-27 and 4-7-29 have respective depths of 100 feet and 80 feet, and are completed in gravel. Well 4-7-28 is 113 feet in depth and completed in bedrock. Reported water levels of 63 feet for 4-7-28 and 60 feet for 4-7-29 are believed to have been measured in the early 1950's. Based on the surface elevation of the wells, the associated groundwater elevation is approximately 610 feet above MSL for these wells. No water level measurement was reported for 4-7-27. Based on this limited information and the approximate elevation of the Site (650-660 feet), it is likely that the depth to groundwater at the Site is on the order of 40 to 50 feet below ground level.

Drinking water at the adjacent portions of the Moundsville Calcining Plant is provided by an on site groundwater system. According to EDR, three wells that are part of a non-transient non-community public water supply system are listed under the ownership of Conoco Inc., Venture Coke Co., LLC. According to the USEPA SDWIS, Venture Coke Co. LLC is listed as the owner of a non-transient non-community public water system (Water System ID WV9925018) serving a population of 50 with groundwater as the primary source. A non-transient, non-community public water supply system (Water System ID WV9925015) was also identified at the adjacent Mitchell Generating Station to the south, and apparently serves a population of 250.

According to the Marshall County Health Department, facilities and residences along Route 2 within a four mile radius of the Site are also served by groundwater.

3.4 Historical Use Information on the Property

In order to develop a chronology of operational activities at the Site, a review of historical topographic maps and aerial photographs available from the West Virginia Geologic and Economic Survey (WVGES), West Virginia State Geographic Information Systems (WVGIS), and USGS was performed. A 1905 and 1935 topographic map of the Site (*Clarington, Ohio* 15-minute quadrangle) and a 1960 (Photo revised 1972 and 1976, Photo inspected 1984) 7.5-minute topographic map of the Site (*Powhatan Point, Ohio-W. VA*) were available for review. Aerial photographs of the Site Property were available for the following years: 1938, 1956, 1997, 2003, and 2005.

A review of the 1905 and 1935 historical 15-minute topographic maps indicated the Site and adjoining areas were undeveloped, with the exception of the railroad to the west and Route 2 to the east. A small unnamed tributary stream of the Ohio River is present in the area that now appears to be the northern portion of the Moundsville Calcining Plant facility. The 1960 (Photo revised 1972 and 1976, Photo inspected 1984) 7.5-minute topographic map of the Site (*Powhatan Point, Ohio-W. VA*) indicated the presence of the Moundsville Calcining Plant and the adjacent Mitchell Power Plant to the south. The facilities are shown in purple as photo revisions, indicating that they were constructed after the 1956-1957 aerial photography on which the 1960 version of the map was based, and before the 1972 photo revision. This is

consistent with information available on the website of the current owner (CII Carbon, LLC), which indicates the plant was commissioned in 1957. The unnamed tributary shown on the 15-minute topographic maps appears to be partially covered by the coke plant facility, and is believed to be piped beneath the facility.

The 1938 and 1956 aerial photographs show the Site and immediately surrounding areas as undeveloped. The 1956 photograph shows a disturbed area further to the north in the vicinity of the present location of the Kammer Power Plant. The 1997, 2003, and 2005 photographs show the Site and surrounding areas to be developed essentially as they appear today.

3.5 Historical Site Investigations and Remedial Activities

Limited records are available regarding activities performed at the Venco Coke Fire ER CERCLIS Site due to the short duration of the incident. Pertinent available records are presented as **Appendix 2, *VENCO Coke Fire Response Reports.***

The Site was listed on CERCLIS in February 2004 following a USEPA Region III response to a coke fire reported on February 10, 2004. The cause of the fire is uncertain, and may have been spontaneous combustion. The Material Safety Data Sheets (MSDS) listing the properties of green petroleum coke are presented in **Appendix 3, *Green Petroleum Coke MSDS***.

The fire, which occurred in the green petroleum coke storage area at the Venco facility, was first observed by facility personnel on February 9, 2004 and reported to the National Response Center (NRC) on February 10, 2004. Site personnel indicated the fire was not reported immediately upon discovery while they were performing calculations to determine if they may have exceeded allowable quantities of airborne contaminants. Air quality monitoring performed at two-hour intervals beginning at 0800 on February 10, 2004 and continuing until 1430 on February 11, 2004 indicated sulfur dioxide (SO_2) and carbon monoxide (CO) did not exceed allowable limits. After the initial report was received, NRC subsequently notified other Federal and State agencies, including USEPA Region III, National Oceanic and Atmospheric Administration (NOAA), Ohio River Valley Water Sanitation Commission (ORSANCO), WVDEP, Ohio EPA, and Pennsylvania Emergency Management Agency. The NRC Incident Description Report is presented in **Appendix 2**.

The USEPA Superfund Technical Assessment and Response Team (START) visited the Site daily during February 10-13, 2004 during firefighting activities. Three pollution reports (POLREPs) dated February 11, 12 and 16, 2004 were prepared by the USEPA On-scene Coordinator (OSC) and are included in **Appendix 2**. Due to the short duration of the response activity, a summary of key daily events is given below.

February 10, 2004 – The burning pile of petroleum coke was observed to be approximately 120 feet at the base and 50 feet in height, with exposed fire in several areas. The appearance of the fire was described as similar to charcoal in a home grill, with some steam-like white smoke. Facility personnel estimated the volume of the coke pile to be around 12,000 tons, of which 5,000 tons were at risk from the fire. Facility personnel were also observed actively

performing air monitoring. The monitoring was performed at two-hour intervals beginning at 0800, and did not detect amounts of SO_2 and CO in excess of allowable limits. The Venco environmental representative indicated plans were to remove portions of the pile unaffected by the fire, and use water cannons to extinguish the fire. Initial estimates of two to three weeks to fully extinguish the fire are given.

February 11, 2004 – Venco personnel had begun the extinguishing operation, and indicated that all water from the area was being contained and routed through a filtration system utilizing four rail cars filled with varying sizes of coke particles as the filtration system. Continued air monitoring performed by Venco personnel at two-hour intervals through 1430 on this date did not detect amounts of SO_2 and CO in excess of allowable limits. No further air monitoring was performed by Venco personnel after 1430 on February 11, 2004. The OSC visited the Site and observed that unaffected coke was being removed from the vicinity of the fire, and that runoff from the water cannons was being contained.

February 12, 2004 – A START member met with Rosalyn Murzyn, facility environmental coordinator, to examine the NPDES permit and previous two years of monitoring results. No sampling results had exceeded permit limitations. The START member observed the filtration system where the water generated during firefighting activity was being routed, and observed that there was no oily sheen in the discharge. Unburned portions of the pile had been removed, with the overall pile size reduced by an estimated 30 percent. An unmanned fire hose was spraying a continuous stream of water on the pile. No actively burning areas could be noted on the surface of the pile, and steam was rising from a number of locations. Several digital photographs were collected by Site personnel, as no outside photography is permitted. These photographs are presented in **Appendix 4, 2004 Coke Fire Photographs**.

February 13, 2004 – A START member met with Ms. Murzyn and observed that two unmanned fire hoses were spraying continuous water streams on the coke pile to cool any remaining hot spots. Some steam was still evident. The overall pile size was estimated to have been reduced by 70 to 80 percent since February 10, 2004. End loaders were observed removing cooled product from the pile and relocating it to other parts of the facility. Ms. Murzyn reported that the firefighting was progressing better than expected and estimated it would be completed by February 14, 2004. START performed air monitoring near the pile and obtained zero readings for CO and SO_2.

February 16, 2004 – START contacted Ms. Murzyn by telephone for an update on the firefighting activities, and was informed the fire had been completely extinguished on February 13, 2004. No further EPA activity was anticipated after this date.

3.6 Historical Use Information on Adjoining Properties

Based upon available historical use information, there are no recognized environmental conditions associated with properties that adjoin the Site.

3.7 Potentially Responsible Parties

The owner and Potentially Responsible Party (PRP) of the Moundsville Calcining Plant and the Site at the time of the coke fire was Venture Coke Company (Venco), which was owned by ConocoPhillips. The local and corporate contact information at the time of the incident is given below:

Local: Venture Coke Company
Route 2 South, PO Box 577
Moundsville, West Virginia 26041
Telephone: 304-843-0245
Contact: Ms. Rosalyn Murzyn, Environmental Coordinator

Corporate: Conoco Phillips Company
600 North Dairy Ashford
PO Box 2197
Houston, Texas 77252-2197
Telephone: 281-293-1000

The current owner of the Site since August 2005 is CII Carbon, LLC. The current local and corporate contact information are given below:

Local: CII Carbon Moundsville Plant
3 Energy Road
Moundsville, West Virginia 26041
Telephone: 304-843-0200

Corporate: CII Carbon, LLC
800 Rockmead Drive
Suite 250
Kingwood, Texas 77339
Telephone: 281-359-1487

4.0 SITE RECONNAISSANCE

4.1 Methodology and Limiting Conditions

A limited site reconnaissance was performed on March 8, 2006 by Ms. Lydia Work of TRIAD. The Site was fully operational at this time, and access was restricted. Most observations were made from the perimeter of the Site, and were sufficient to ascertain that the conditions associated with the previously documented coke fire no longer exist. As part of the site reconnaissance activities, TRIAD obtained digital photographs of the Site from perimeter areas as well as adjoining properties. The photographs are presented in **Appendix 5, *2006 Site Reconnaissance Photographs***.

4.2 General Site Setting

As discussed previously, the Site is located in a former rural area of Marshall County that has experienced industrial development, including power generation, mining, and coke processing. The Site is approximately 10 miles south of Moundsville along State Route 2. The Site and surrounding area topography is flat to gently sloping toward the Ohio River. The Site is a raw coke storage area and is proximate to the calcining plant and paved access road. Adjoining properties to the north, east and south are mostly industrial areas used for coke processing, power generation and transmission, and mining. The Ohio River and rural areas of eastern Ohio are adjoining to the west.

4.3 Observations

The following were observed during the site reconnaissance:

- Access to the Site is via a restricted paved access road off of State Route 2.
- The Site is relatively flat, with a gentle gradient west-southwest toward the Ohio River.
- The Site is currently used for raw petroleum coke storage. The raw petroleum coke is processed at the adjoining portions of the Moundsville Calcining Plant to produce a high carbon, low volatile coke product.
- The entire Site is utilized as a raw petroleum coke storage area.
- No residences are present at or immediately adjacent to the Site. There do not appear to be any residences within one mile of the Site on the West Virginia side of the Ohio River.
- There was no evidence of either underground or above ground storage tanks (USTs and ASTs) or associated vent pipes, or fill pipes.
- There were no strong, pungent, or noxious odors observed during the site reconnaissance.
- There was no evidence of pits, ponds, lagoons, pools of liquid, or standing surface water observed that would be indicative of hazardous substances or petroleum products.
- There were no drums present at the Site.
- There was no evidence of electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs observed at the Site.
- Ground cover at the Site was covered with raw petroleum coke and could not be

directly observed.

- There was no vegetation at the Site due to the use of the Site for raw petroleum coke storage.

- There did not appear to be any areas that have been filled or graded that would suggest trash or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal.

- There was no evidence that portions of the Site had been formerly surface or deep mined.

5.0 CONTAMINANT MIGRATION PATHWAYS AND RECEPTORS

5.1 Contaminants of Potential Concern

Based on the investigations performed to date at the Venco Coke Fire ER Site and operational knowledge of the Site, the CERCLA contaminants of potential concern (COPCs) are:

- Polynuclear Aromatic Hydrocarbons (PAHs)

These COPCs were selected as they are known to be associated with raw petroleum coke. The selection was not based on any measurement for the presence of CERCLA COPCs at the Site. Analytical data were not collected. In order to be conservative, and for purposes of determining a "worst case" scenario in the preliminary Site Hazard Ranking System (HRS) scoring, the toxicological properties for benzo[a]pyrene were used for calculating the preliminary HRS score. Although no release was observed, it was estimated that potentially 100 pounds of benzo[a]pyrene were released during the coke fire for the purposes of the HRS evaluation.

5.2 Areas of Potential Environmental Concern

Based on the investigations performed to date at the Site, the following is the only area of potential environmental concern:

- Raw coke storage area of the Moundsville Calcining Plant.

5.3 Groundwater

Based upon available information, groundwater in the area is utilized at local industrial facilities, with possible limited usage for domestic purposes within the HRS target distance limit (TDL) of four miles. Quaternary alluvium deposits are present in valley bottom areas along the Ohio River. The thickness of the alluvial deposits is believed to be up to 80 to 100 feet on Cresap Bottom. The areal extent of these deposits is limited by the topography east of State Route 2, and narrowing of the river bottom to the north and south. The alluvial deposits

are underlain by rocks of the Pennsylvanian Monongahela Group, which consist of alternating sequences of sandstone, shale, thin limestones, and coal. The Pittsburgh coal, which lies at the base of the Monongahela Group and is approximately 150 feet in elevation beneath the Site, has been extensively mined locally by underground methods, but is unmined beneath the Site. Areas at higher elevations to the east are capped by the Permian Dunkard Group, which consists of alternating sequences of sandstone, siltstone, shale, limestone, and thin coals. Groundwater at the Site would be expected to be encountered at depths of approximately 40 to 50 feet bgs, based on information presented in *Geology and Economic Resources of the Ohio River Valley in West Virginia* (West Virginia Geological Survey, 1956). The direction of groundwater flow at the Site would generally be expected to be west/southwest toward the Ohio River.

An estimated 1139 people reside within the groundwater HRS TDL of four miles of the Site. The population totals reflect those in West Virginia, and do not include possible residents on the Ohio side of the Ohio River. The Ohio River presents a significant hydrologic barrier to the migration of any potential groundwater contaminants to the west. Known groundwater HRS targets within the HRS TDL of four miles of the Site include three non-transient, non-community groundwater-based public water supplies. These include the Moundsville Calcining Plant; the adjacent Mitchell Power Plant to the south; and the Kammer Power Plant to the north. The three water systems serve an estimated total population of 550 persons presumed to consist entirely of workers employed at the three facilities. The short duration of the coke fire and the capture and treatment of all waters used to extinguish the fire would prevent any Site-related impacts to these water systems.

Many residents in the outlying areas around Moundsville are served by public water systems operated by four Public Service Districts (PSD's) that purchase water from the City of Moundsville whose drinking water source is outside HRS TDL. Those residents served by wells that are located to the northeast, east and southeast of the Site within the four mile TDL would most likely lie in upland areas. These wells would most likely penetrate consolidated bedrock strata upgradient from the river bottom sediments, and would not be affected by the Site. However, in order to be conservative, the entire population (1139 persons) within the four-mile HRS TDL was presumed to be served by groundwater as a source of domestic supply.

There are no known community public water systems supplied by groundwater within the four-mile HRS TDL of the Site.

5.4 Surface Water

There are no known public water supply intakes within the HRS TDL of 15 miles downstream of the Site.

There are no expressions of surface water on the Site. A small unnamed tributary of the Ohio River formerly transected the northern portion of the area now occupied by the Moundsville Plant facility, and now appears to be routed beneath the facility. The stream does not support use as a public water supply or utilization for recreational activities such as fishing, boating,

or swimming. The Ohio River is located immediately west of the Site. Sanitary wastewater and storm water from the Moundsville Calcining Plant are discharged to the Ohio River. Wastewater effluent is monitored quarterly at Outlet 002 under the facility NPDES Permit (WV0004642). There is a separate treatment system for the containment and treatment of storm water runoff. Storm water effluent is monitored quarterly at Outlet 003 under the above-referenced NPDES permit. START examined the facility's NPDES permit and previous two years of monitoring results during response activities at the Site in February 2004. The NPDES results reviewed did not exceed permit limitations.

As previously noted, all water used to extinguish the coke fire in 2004 was captured and routed through a filtration system and then treated at the facility's storm water treatment system. Monitoring indicated that the discharge did not exceed permit limitations.

5.5 Soil

Risk of exposure to COPCs in soil at the Site is low due to construction characteristics of the coke storage area. Although bare ground has not been observed at the Site due to the presence of raw coke at the storage area, the area beneath the raw coke piles appears to consist of pavement or highly compacted graded material. The use of the Site area before and after the coke fire incident has been for raw coke storage, and no additional potential contaminants other than those associated with raw petroleum coke would have resulted from the fire. Finally, due to the location of the Site within an industrial facility with restricted access, there are essentially no individuals other than Site employees potentially being exposed to the soil at the Site.

5.6 Air

The air pathway was the primary pathway of concern at the Venco Coke Fire ER CERCLIS Site due to combustion of raw petroleum coke. According to the MSDS for green petroleum coke obtained from USEPA project files (**Appendix 3**), products of combustion are carbon oxides (CO and CO_2). CO and SO_2 were monitored continuously during response activities on February 10 and 11, 2004, and found to be at acceptable levels.

There are approximately 550 total workers at the adjoining Moundsville Calcining Plant and the nearby Mitchell and Kammer Power Plants within the air HRS TDL of one mile of the Site. There are no residents present within the air HRS TDL of one mile. The population totals reflect those in West Virginia, and do not include possible residents on the Ohio side of the Ohio River. A review of available topographic maps and aerial photographs reveals a possible house count of less than five in Ohio, or an estimated 20 residents, within a one mile radius of the Site.

The low number of potentially affected residents, the limited exposure to workers, the short duration of the coke fire, and the measurement of air contaminants below action levels at the Site during the fire would minimize the potential for any Site-related air quality impacts.

5.7 Ecological

There are no known critical environments or endangered species within the Site area. No wetland areas were identified at the Site.

6.0 Hazard Ranking System (HRS) Site Score

6.1 2006 HRS Site Score

A preliminary HRS site score was calculated using HRS QuickScore, version 2.3, by TRIAD. The Venco Coke Fire ER CERCLIS Site received a preliminary score of 0.08. A copy of the QuickScore HRS package is presented in **Appendix 6, *2006 HRS Package***. The HRS site score was generated following the guidelines of *The Revised Hazard Ranking System: Evaluating Sites After Waste Removals*. The removal actions performed by the PRP under supervision of the USEPA Region III OSC were considered in the HRS scoring due to the following: (1) the removal occurred immediately following the discovery, (2) there were no observed releases, and (3) the potential of COPCs to migrate was mitigated at the facility by containment and treatment on site.

Therefore, the low preliminary HRS site score of 0.08 was based on the successful removal activities conducted at the Site, no observed release, the inaccessibility of the Site during removal resulting in few targets, and the PRP's ability to contain the waste and reduce its potential to migrate.

6.2 Data Gaps

Data gaps are locations and/or media associated with the Site that have not been adequately assessed for waste characteristics. Based upon available information, there are data gaps at the Venco Coke Fire ER CERCLIS Site. However, these data gaps are not critical in that they would not significantly impact the overall HRS site score.

Based upon available information, groundwater quality has not been characterized at the Site or immediately adjoining areas. As discussed previously, the adjoining portions of the Moundsville Calcining Plant are served by a non-transient, non-community water system supplied by three wells. However, based upon the depth of the water table, and the containment, treatment, and surface discharge of drainage and runoff from the coke storage area, migration of COPCs to the drinking water aquifer at the Site is unlikely.

7.0 SUMMARY AND RECOMMENDATIONS

The Venco Coke Fire ER CERCLIS Site is located in an area of Marshall County, West Virginia that has been characterized by industrial development in recent years. The industrial development has included coke processing; power generation and transmission, and underground coal mining and related activities.

A green petroleum coke fire due to unknown causes was first detected at a raw coke storage

area at the Venco facility on February 9, 2004, and reported to the NRC on February 10, 2004. Portions of the raw coke pile that were unaffected by the fire were removed to prevent combustion, and firefighting activities were initiated on February 11, 2004. All runoff water was captured by containment in the storage area and routed through the facility's storm water treatment plant. Air monitoring performed during removal activities indicated CO and SO_2 were below action levels. The fire was extinguished by the evening of February 13, 2004.

No previous HRS site scoring was performed during the initial response at the Site. A preliminary HRS site score of 0.08 was calculated based on site conditions following the removal performed. Any HRS site score above 28.50 warrants further CERCLA assessment or remediation activities.

Based upon current site conditions, no further CERCLA action at the Venco Coke Fire ER CERCLIS Site is recommended.

8.0 CONTACT INFORMATION

The following points of contact provided pertinent information associated with the Venco Coke Fire ER CERCLIS Site:

8.1 Federal Contacts

Mr. James Hargett, Superfund Site Assessment Manager
U.S. Environmental Protection Agency
Region III,
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
Telephone: 215-814-3305
E-mail: Hargett.James@epa.gov

Mr. Dennis Matlock, OSC
U.S. Environmental Protection Agency
Region III,
1060 Chapline Street
Wheeling, West Virginia 26003
Telephone: 304-234-0250
E-mail: Matlock.Dennis@epamail.epa.gov

8.2 State Contacts

Ms. Pam Hayes, Site Assessment Project Manager
West Virginia Department of Environmental Protection
Office of Environmental Remediation
601 57th Street, SE

Charleston, West Virginia 25304
Telephone: 304-926-0499
E-mail: phayes@wvdep.org

8.3 Local Parties

No local parties were directly involved in this investigation.

8.4 Potentially Responsible Parties

The local and corporate contact information at the time of the incident are given below:

Local: Venture Coke Company
Route 2 South, PO Box 577
Moundsville, West Virginia 26041
Telephone: 304-843-0245
Contact: Ms. Rosalyn Murzyn, Environmental Coordinator

Corporate: ConocoPhillips Company
600 North Dairy Ashford
PO Box 2197
Houston, Texas 77252-2197
Telephone: 281-293-1000

The current owner of the Site since August 2005 is CII Carbon, LLC. The current local and corporate contact information are given below:

Local: CII Carbon Moundsville Plant
3 Energy Road
Moundsville, West Virginia 26041
Telephone: 304-843-0200

Corporate: CII Carbon, LLC
800 Rockmead Drive
Suite 250
Kingwood, Texas 77339
Telephone: 281-359-1487

9.0 REFERENCES

National Response Center, *Incident Report #71292.* February 10, 2004.

MSDS – Petroleum Coke, Green (Anode Grade). Premcor Refining Group, Clayton, MO: April 2001.

Pollution Reports #1 through 3 & Final, Venco Coke Fire Emergency Response. USEPA Region III OSC, February 2004.

Final Monthly Summary Report, Venco Coke Fire. Superfund Technical Assessment and Response Team, TDD # SW#-04-02-003, February 29, 2004.

National Pollutant Discharge Elimination System Water Pollution Control Permit WV0004642. WVDEP Office of Water Resources, December 23, 1999.

Hazard Ranking System; Final Rule. United State Environmental Protection Agency, December 14, 1990.

Hazard Ranking System Guidance Manual. United States Environmental Protection Agency, November 1992.

The Revised Hazard Ranking System: Evaluating Sites After Waste Removals. United States Environmental Protection Agency, October 1991.

US EPA Safe Drinking Water Information System (SDWIS)
http://www.epa.gov/enviro/html/sdwis/sdwis_query.html#geography)

West Virginia Geologic Survey. *Geology of the Ohio River Valley in West Virginia: Part 1*. December 1, 1956.

West Virginia Geological Survey. *Groundwater Resources of the Ohio River Valley in West Virginia. Part II*. June 30, 1955.

United States Department of Agriculture, Soil Conservation Service. *Soil Survey of Marshall County, West Virginia*. May 1960.

Environmental Data Resources, Inc., *EDR Radius Map with GeoCheck®, Venco Coke Fire*, Route 2 South, Moundsville, WV, 26041, May 16, 2006.

1905 United States Geological Survey, *Clarington, Ohio* 15-minute topographic quadrangle map.

1935 United States Geological Survey, *Clarington, Ohio* 15-minute topographic quadrangle map.

1960 (Photo revised 1972 and 1976) *Powhatan Point, OHIO-W.VA* 7.5-minute topographic quadrangle map.

Marshall County West Virginia Courthouse Records, Digital Courthouse, LLC, a division of GeoWeb, LLC. http://www.digitalcourthouse.com.

Appendix 1

EDR Radius Map with Geocheck®

The EDR Radius Map
with GeoCheck®

Venco Coke Fire Site
Route 2 South
Moundsville, WV 26041

Inquiry Number: 1672878.1s

May 16, 2006

EDR® Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

ROUTE 2 SOUTH
MOUNDSVILLE, WV 26041

COORDINATES

Latitude (North):	39.830300 - 39° 49' 49.1"
Longitude (West):	80.819200 - 80° 49' 9.1"
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	515471.6
UTM Y (Meters):	4408728.5
Elevation:	654 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	39080-G7 POWHATAN POINT, WV
Most Recent Revision:	1984

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
VENCO COKE FIRE ER ROUTE 2 SOUTH MOUNDSVILLE, WV 26041	CERCLIS	WVN000306095
VENCO MOUNDSVILLE CALCINING PLT RT 2 - S MOUNDSVILLE, WV 26041	TSCA	N/A
VENCO MOUNDSVILLE CALCINING PLANT RT. 2 SOUTH MOUNDSVILLE, WV 26041	TSCA	N/A
VENTURE COKE CO LLC - MOUNDSVILLE RT 2 S MOUNDSVILLE, WV 26041	TRIS	26041VNTRCRT
VENCO L.L.C. RT 2 BOX 577 MOUNDSVILLE, WV 26041	WV UST	N/A

EXECUTIVE SUMMARY

VENTURE COKE COMPANY LLC
STATE RT NO 2 SOUTH
MOUNDSVILLE, WV 26041

RCRA-SQG
FINDS

WVD988790150

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL RECOVERY	Federal Superfund Liens
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

WV SHWS	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
OH SHWS	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
OH DERR	Division of Emergency & Remedial Response's Database
OH TOWNGAS	DERR Towngas Database
OH MSL	Master Sites List
WV SWF/LF	List of M.S.W. Landfills/Transfer Station Listing
OH SWF/LF	Licensed Solid Waste Facilities

EXECUTIVE SUMMARY

OH HIST LF..... Old Solid Waste Landfill
WV LUST..... Leaking Underground Storage Tanks
OH LUST..... Leaking Underground Storage Tank File
OH UNREG LTANKS..... Ohio Leaking UST File
OH UST..... Underground Storage Tank Tank File
OH ARCHIVE UST..... Archived Underground Storage Tank Sites
WV SPILLS..... Spills Listing
OH Spills..... Emergency Response Database
OH ENG CONTROLS..... Sites with Engineering Controls
WV INST CONTROL..... Sites with Institutional Controls
OH INST CONTROL..... Sites with Institutional Engineering Controls
WV VCP..... Voluntary Remediation Sites
OH VCP..... Voluntary Action Program Sites
WV DRYCLEANERS..... Listing of Drycleaner Locations
OH DRYCLEANERS..... Drycleaner Facility Listing
OH BROWNFIELDS..... Ohio Brownfield Inventory
WV CDL..... Drug Lab Site Locations
OH CDL..... Clandestine Drug Lab Locations
OH USD..... Urban Setting Designation Sites
OH HIST INST CONTROLS.. Institutional Controls Database
OH HIST ENG CONTROLS.. Operation & Maintenance Agreements Database

TRIBAL RECORDS

INDIAN RESERV..... Indian Reservations

EDR PROPRIETARY RECORDS

Manufactured Gas Plants... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of

hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/24/2006 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
DTE INDYCOKE LLC	5 ENERGY DR	1/8 - 1/4 ESE	7	10

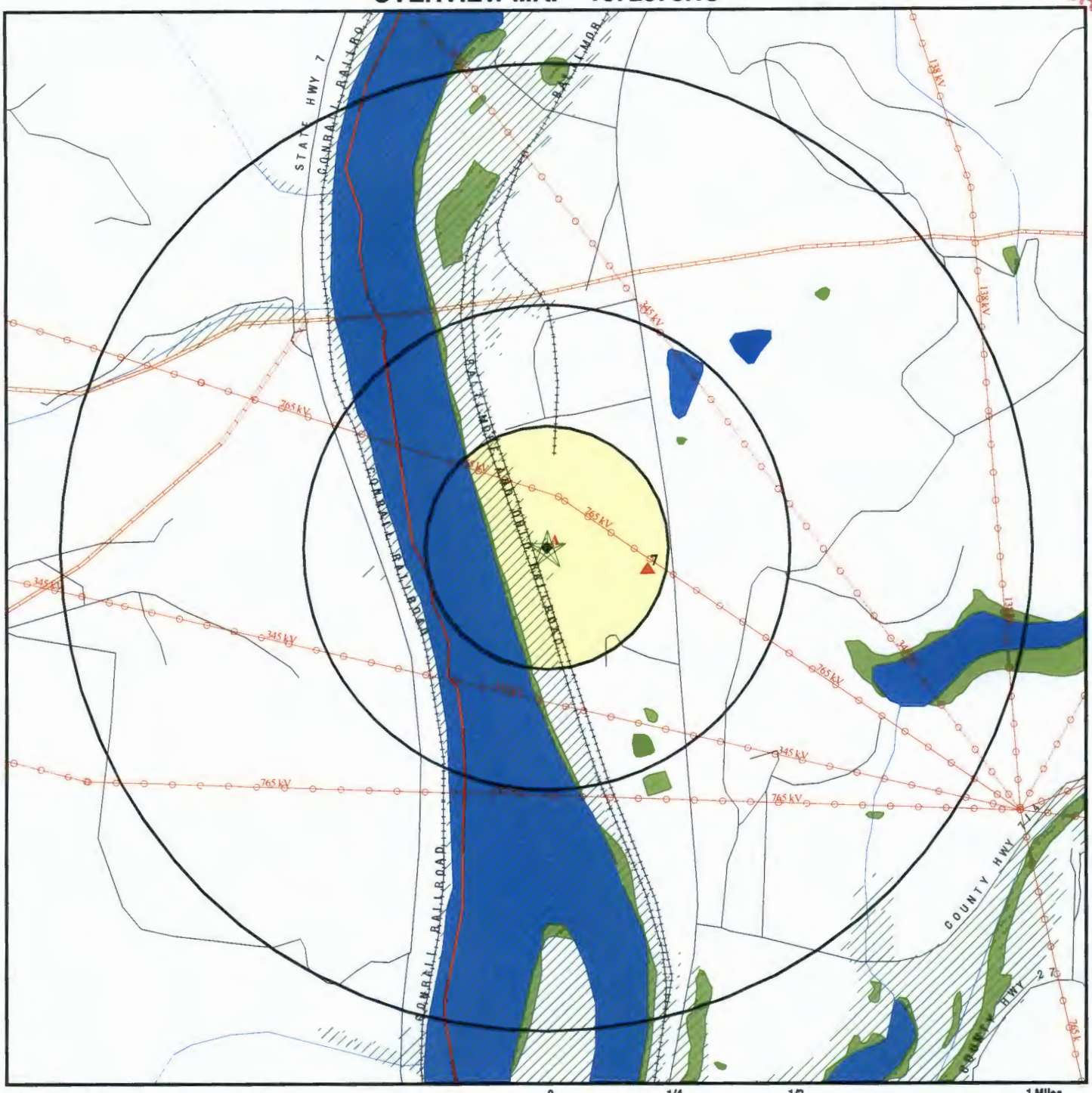
EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
MIDWAY ROUTE 2	CERCLIS, FINDS
ROUND BOTTOM HILL	CERC-NFRAP
MOUNDSVILLE LANDFILL	CERC-NFRAP
POWHATAN 4 MINE	OH LUST
MCINTIRE CARTAGE	OH LUST
FORMER ROBINSON PETROLEUM	WV LUST, WV UST
HOWELL PROPERTY	WV LUST, WV UST
CERTIFIED OIL CO. #344	OH LUST, OH ARCHIVE UST
POWHATAN FUEL CENTER	OH LUST, OH ARCHIVE UST
BRUBAKER'S ASHLAND	OH LUST, OH UST, OH ARCHIVE UST
D & K EXCAVATING	OH LUST
REED MINERALS DIVISION HARSCO CO	WV UST
KAMMER POWER PLANT	WV UST
SAM YANE FORD SALES INC	WV UST
PLEASANT VALLEY COMMUNITY CENTER	WV UST
KAMMER GENERATING STATION	WV UST
LCP CHEMICALS-WV INC	WV UST
J & R EXCAVATING/NO FORM	WV UST
KOONTZ SERVICE STATION	WV UST
AMES DEPARTMENT STORE #0561	WV UST
COLUMBIA CHEMICAL CO	WV UST
MCELROY MINE	WV UST
SHOEMAKER MINE	WV UST
IRELAND MINE	WV UST
LIMESTONE HILL-PALACE RD TRANSFORMER DMP	RCRA-SQG, FINDS
CNG TRANSMISSION - MOUNDSVILLE	RCRA-SQG
MOUNTAIN STATE AVIATION	RCRA-SQG, FINDS
COLUMBIAN CHEMCIALS COMPANY	RCRA-SQG, TRIS
TETCO-CUNNINGHAM VLVS MP 714.11	RCRA-SQG, FINDS
TETCO-M&R 005 MP 714.58 LN 15	RCRA-SQG, FINDS
TETLP - OH RV L15 MP 709.75	RCRA-SQG, FINDS
MATTHEWS BODY SHOP	RCRA-SQG, FINDS
KLUG BROS INC	RCRA-SQG, FINDS
CALGON CORP	RCRA-SQG, FINDS
OHIO POWER - MITCHELL PLANT	PADS, RCRA-SQG, FINDS
OHIO POWER-KAMMER PLT	PADS, RCRA-SQG, FINDS
ALLIED CHEM CORP MOUNDSVILLE WORKS	RCRA-SQG
SHUTLERS WOODWORKING	RCRA-SQG, FINDS
MOUNTAINEER CARBON CO	RCRA-SQG, FINDS
IRELAND MINE CONSOL COAL CO	RCRA-SQG, FINDS
SHUTLER CABINET INC	RCRA-SQG, FINDS
MD ELROY MINE/GAME'S RIDGE AIRSHAFT SITE, COUNTY ROUTE 74, F	ERNS

PFE ORIGINAL

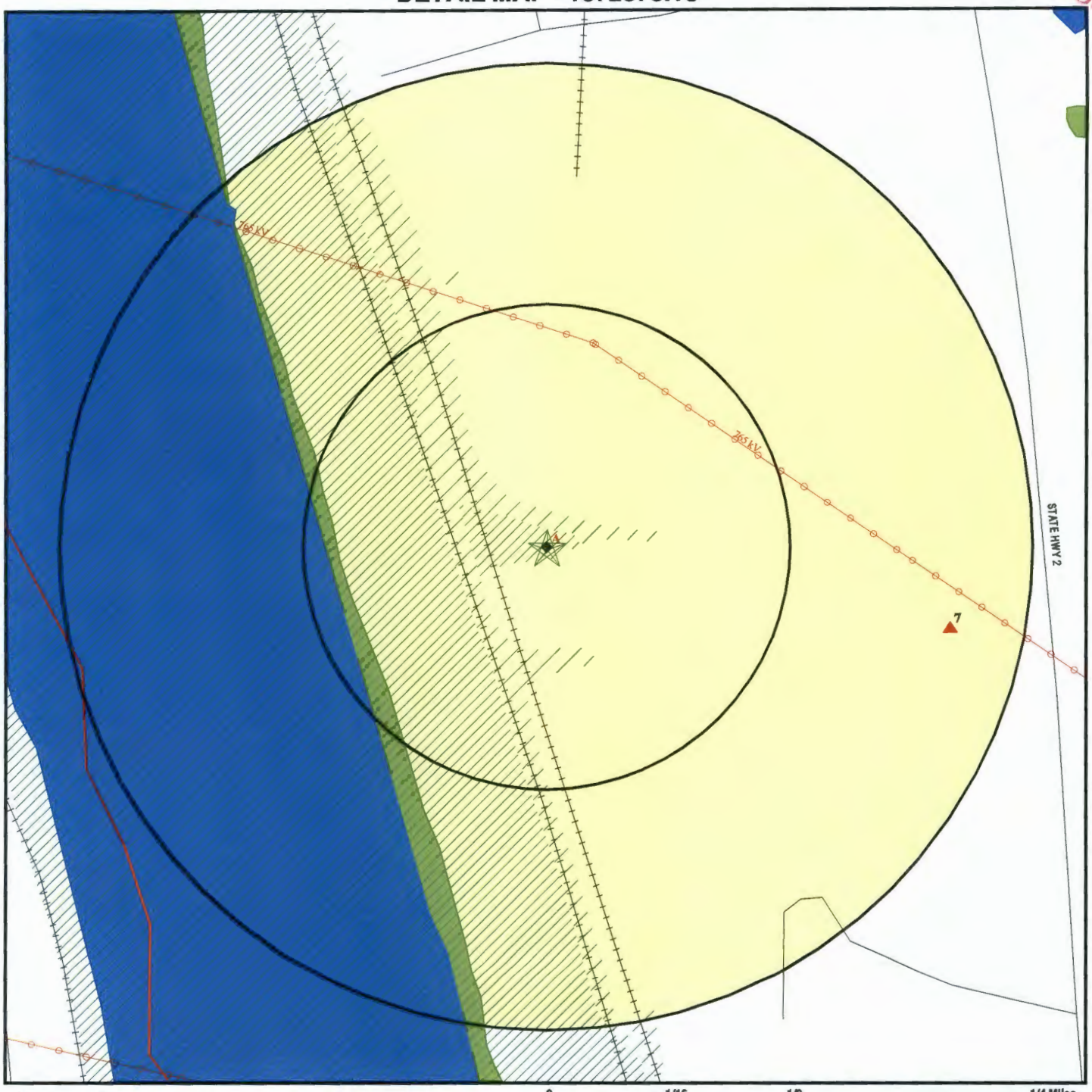
OVERVIEW MAP - 1672878.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

SITE NAME: Venco Coke Fire Site ADDRESS: Route 2 South Moundsville WV 26041 LAT/LONG: 39.8303 / 80.8192	CLIENT: Triad Engineering CONTACT: Gary Hilgar INQUIRY #: 1672878.1s DATE: May 16, 2006

DETAIL MAP - 1672878.1s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

SITE NAME: Venco Coke Fire Site	CLIENT: Triad Engineering
ADDRESS: Route 2 South Moundsville WV 26041	CONTACT: Gary Hilgar
LAT/LONG: 39.8303 / 80.8192	INQUIRY #: 1672878.1s DATE: May 16, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS	X	0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.	X	0.250	0	1	NR	NR	NR	1
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS	X	TP	NR	NR	NR	NR	NR	0
TSCA	X	TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
WV State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
OH State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
OH DERR		TP	NR	NR	NR	NR	NR	0
OH TOWNGAS		1.000	0	0	0	0	NR	0
OH MSL		1.000	0	0	0	0	NR	0
WV State Landfill		0.500	0	0	0	NR	NR	0
OH State Landfill		0.500	0	0	0	NR	NR	0
OH HIST LF		0.500	0	0	0	NR	NR	0
WV LUST		0.500	0	0	0	NR	NR	0
OH LUST		0.500	0	0	0	NR	NR	0
OH UNREG LTANKS		0.500	0	0	0	NR	NR	0
WV UST	X	0.250	0	0	NR	NR	NR	0
OH UST		0.250	0	0	NR	NR	NR	0
OH ARCHIVE UST		0.250	0	0	NR	NR	NR	0
WV SPILLS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
OH Spills		TP	NR	NR	NR	NR	NR	0
OH ENG CONTROLS		0.500	0	0	0	NR	NR	0
WV INST CONTROL		0.500	0	0	0	NR	NR	0
OH INST CONTROL		0.500	0	0	0	NR	NR	0
WV VCP		0.500	0	0	0	NR	NR	0
OH VCP		0.500	0	0	0	NR	NR	0
WV DRYCLEANERS		0.250	0	0	NR	NR	NR	0
OH DRYCLEANERS		0.250	0	0	NR	NR	NR	0
OH BROWNFIELDS		0.500	0	0	0	NR	NR	0
WV CDL		TP	NR	NR	NR	NR	NR	0
OH CDL		TP	NR	NR	NR	NR	NR	0
OH USD		0.500	0	0	0	NR	NR	0
OH HIST INST CONTROLS		0.500	0	0	0	NR	NR	0
OH HIST ENG CONTROLS		0.500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
A1 **Target Property** **Actual: 653 ft.**	**VENCO COKE FIRE ER** **ROUTE 2 SOUTH** **MOUNDSVILLE, WV 26041** **Site 1 of 6 in cluster A** CERCLIS Classification Data: Federal Facility: Not a Federal Facility Non NPL Status: Removal Only Site (No Site Assessment Work Needed) NPL Status: Not on the NPL CERCLIS Assessment History: Assessment: REMOVAL ASSESSMENT Completed: 02/16/2004 CERCLIS Site Status: Not reported	**CERCLIS**	**1007372378** **WVN000306095**
A2 **Target Property** **Actual: 653 ft.**	**VENCO MOUNDSVILLE CALCINING PLT** **RT 2 - S** **MOUNDSVILLE, WV 26041** **Site 2 of 6 in cluster A** Click this hyperlink while viewing on your computer to access additional TSCA detail in the EDR Site Report.	**TSCA**	**1005933428** **N/A**
A3 **Target Property** **Actual: 653 ft.**	**VENCO MOUNDSVILLE CALCINING PLANT** **RT. 2 SOUTH** **MOUNDSVILLE, WV 26041** **Site 3 of 6 in cluster A** Click this hyperlink while viewing on your computer to access additional TSCA detail in the EDR Site Report.	**TSCA**	**1005933427** **N/A**
A4 **Target Property** **Actual: 653 ft.**	**VENTURE COKE CO LLC - MOUNDSVILLE CALCINING PLANT** **RT 2 S** **MOUNDSVILLE, WV 26041** **Site 4 of 6 in cluster A**	**TRIS**	**1007446031** **26041VNTRCRT**
A5 **Target Property** **Actual: 653 ft.**	**VENCO L.L.C.** **RT 2 BOX 577** **MOUNDSVILLE, WV 26041** **Site 5 of 6 in cluster A** UST: Facility ID: 2-603394 Owner: VENTURE COKE COMPANY LLC Facility Desc: INDUSTRIAL PO BOX 577 MOUNDSVILLE, WV 26041 Owner Phone: (281) 293-5292 Tank ID: 6 Tank Material: Fiberglass Reinforced Plastic Tank Status : Currently in Use	**WV UST**	**U003761278** **N/A**

VENCO L.L.C. (Continued) **U003761278**

Piping Material Description :	Fiberglass Reinforced Plastic
Overfill Installed :	Yes
Installed Spill Protection :	Yes
Cathodic Protection Method :	Yes
Date Last Used :	Not reported
Date Closed :	Not reported
Closure Status Description :	Not listed
Tank Substance:	Gasoline
Tank Capacity:	2000
Facility ID:	2-603394
Owner:	VENTURE COKE COMPANY LLC
Facility Desc:	INDUSTRIAL PO BOX 577 MOUNDSVILLE, WV 26041
Owner Phone:	(281) 293-5292
Tank ID:	D4
Tank Material:	Asphalt Coated or Bare Steel
Tank Status :	Permanently Out of Use
Piping Material Description :	Other
Overfill Installed :	No
Installed Spill Protection :	No
Cathodic Protection Method :	No
Date Last Used :	11/30/1992
Date Closed :	12/10/1992
Closure Status Description :	Tank removed from ground
Tank Substance:	Used Oil
Tank Capacity:	275
Facility ID:	2-603394
Owner:	VENTURE COKE COMPANY LLC
Facility Desc:	INDUSTRIAL PO BOX 577 MOUNDSVILLE, WV 26041
Owner Phone:	(281) 293-5292
Tank ID:	D7
Tank Material:	Asphalt Coated or Bare Steel
Tank Status :	Permanently Out of Use
Piping Material Description :	Other
Overfill Installed :	No
Installed Spill Protection :	No
Cathodic Protection Method :	No
Date Last Used :	10/15/1990
Date Closed :	10/22/1990
Closure Status Description :	Tank removed from ground
Tank Substance:	Used Oil
Tank Capacity:	8000
Facility ID:	2-603394
Owner:	VENTURE COKE COMPANY LLC
Facility Desc:	INDUSTRIAL PO BOX 577 MOUNDSVILLE, WV 26041
Owner Phone:	(281) 293-5292
Tank ID:	3
Tank Material:	Fiberglass Reinforced Plastic
Tank Status :	Currently in Use

VENCO L.L.C. (Continued) **U003761278**

Piping Material Description : Fiberglass Reinforced Plastic
Overfill Installed : No
Installed Spill Protection : No
Cathodic Protection Method :Yes
Date Last Used : Not reported
Date Closed : Not reported
Closure Status Description : Not listed
Tank Substance: Used Oil
Tank Capacity: 550

Facility ID: 2-603394
Owner: VENTURE COKE COMPANY LLC
Facility Desc: INDUSTRIAL
PO BOX 577
MOUNDSVILLE, WV 26041
Owner Phone: (281) 293-5292
Tank ID: 5
Tank Material: Fiberglass Reinforced Plastic
Tank Status : Currently in Use
Piping Material Description : Fiberglass Reinforced Plastic
Overfill Installed : Yes
Installed Spill Protection : Yes
Cathodic Protection Method :Yes
Date Last Used : Not reported
Date Closed : Not reported
Closure Status Description : Not listed
Tank Substance: Diesel
Tank Capacity: 550

Facility ID: 2-603394
Owner: VENTURE COKE COMPANY LLC
Facility Desc: INDUSTRIAL
PO BOX 577
MOUNDSVILLE, WV 26041
Owner Phone: (281) 293-5292
Tank ID: 1
Tank Material: Fiberglass Reinforced Plastic
Tank Status : Currently in Use
Piping Material Description : Fiberglass Reinforced Plastic
Overfill Installed : Yes
Installed Spill Protection : Yes
Cathodic Protection Method :Yes
Date Last Used : Not reported
Date Closed : Not reported
Closure Status Description : Not listed
Tank Substance: Diesel
Tank Capacity: 6000

Facility ID: 2-603394
Owner: VENTURE COKE COMPANY LLC
Facility Desc: INDUSTRIAL
PO BOX 577
MOUNDSVILLE, WV 26041
Owner Phone: (281) 293-5292
Tank ID: D2
Tank Material: Fiberglass Reinforced Plastic
Tank Status : Permanently Out of Use

VENCO L.L.C. (Continued) **U003761278**

Piping Material Description : Fiberglass Reinforced Plastic
Overfill Installed : No
Installed Spill Protection : No
Cathodic Protection Method : Yes
Date Last Used : 11/12/1997
Date Closed : 11/12/1997
Closure Status Description : Tank removed from ground
Tank Substance: Gasoline
Tank Capacity: 2000

A6 **VENTURE COKE COMPANY LLC** **RCRA-SQG** **1004802821**
Target Property **STATE RT NO 2 SOUTH** **FINDS** **WVD988790150**
MOUNDSVILLE, WV 26041

Site 6 of 6 in cluster A

Actual: 653 ft.

RCRAInfo:
Owner: VENTURE COKE COMPANY LLC
(281) 293-5291
EPA ID: WVD988790150

Contact: Not reported

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 40CFR 279.22(C)(1)/33CSR20-14
Area of Violation: WVUOR
Date Violation Determined: 04/18/2001
Actual Date Achieved Compliance: 04/18/2001

Enforcement Action: VERBAL INFORMAL
Enforcement Action Date: 04/18/2001
Penalty Type: Not reported

There are 1 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	WVUOR	20010418

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AEROMETRIC INFORMATION RETRIEVAL SYSTEM/AIRS FACILITY SYSTEM
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND INFORMATION SYSTEM
INTEGRATED COMPLIANCE INFORMATION SYSTEM
NATIONAL EMISSIONS INVENTORY
PERMIT COMPLIANCE SYSTEM
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM
TOXIC CHEMICAL RELEASE INVENTORY SYSTEM

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
7 **ESE** **1/8-1/4** **1116 ft.** **Relative:** **Higher** **Actual:** **721 ft.**	**DTE INDYCOKE LLC** **5 ENERGY DR** **MOUNDSVILLE, WV 26041** RCRAInfo: Owner: DTE INDYCOKE LLC EPA ID: WVR000503649 Contact: GARY PALMER (304) 845-9033 Classification: Conditionally Exempt Small Quantity Generator TSDF Activities: Not reported Violation Status: No violations found	**RCRA-SQG**	**1006931915** **WVR000503649**

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CLARINGTON	S105627239	POWHATAN 4 MINE	OH RT 7	43915	OH LUST
CLARINGTON	S104257641	MCINTIRE CARTAGE	50338 ST RT 78	43915	OH LUST
MOUNDSVILLE	1001216901	LIMESTONE HILL-PALACE RD TRANSFORMER DMP	ROUTE 1, BOX 295	26041	RCRA-SQG, FINDS
MOUNDSVILLE	U003761293	FORMER ROBINSON PETROLEUM	RT 2 SOUTH OF 84 LUMBER	26041	WV LUST, WV UST
MOUNDSVILLE	U003761277	REED MINERALS DIVISION HARSCO CO	RT 2	26041	WV UST
MOUNDSVILLE	U001032637	KAMMER POWER PLANT	RT 2 10 MILES S	26041	WV UST
MOUNDSVILLE	1007117235	CNG TRANSMISSION - MOUNDSVILLE	RT. 2 SOUTH MOUNDSVILLE	26041	RCRA-SQG
MOUNDSVILLE	1004802655	MOUNTAIN STATE AVIATION	RD 2 BOX 322A	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1001114809	MIDWAY ROUTE 2	ROUTE 2	26041	CERCLIS, FINDS
MOUNDSVILLE	1000425776	COLUMBIAN CHEMCIALS COMPANY	RT 2 SOUTH	26041	RCRA-SQG, TRIS
MOUNDSVILLE	1000585119	TETCO-CUNNINGHAM VLVS MP 714.11	ROUTE 21	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1000584805	TETCO-M&R 005 MP 714.58 LN 15	ROUTE 21	26041	RCRA-SQG, FINDS
MOUNDSVILLE	U003761285	SAM YANE FORD SALES INC	RT 250 JEFFERSON AVE	26041	WV UST
MOUNDSVILLE	U003546438	PLEASANT VALLEY COMMUNITY CENTER	RT 250	26041	WV UST
MOUNDSVILLE	1000584803	TETLP - OH RV L15 MP 709.75	RT 74	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1003867098	ROUND BOTTOM HILL	ALT. STATE ROUTE # 2	26041	CERC-NFRAP
MOUNDSVILLE	U003437347	KAMMER GENERATING STATION	PO BOX K RT 2	26041	WV UST
MOUNDSVILLE	U003360689	LCP CHEMICALS-WV INC	PO DRAWER J WV RT 2	26041	WV UST
MOUNDSVILLE	93346500	MD ELROY MINE/GAME'S RIDGE AIRSHAFT SITE, COUNTY ROUTE 74, F	MD ELROY MINE/GAME'S RIDGE AIRSHAFT SITE, COUNTY ROUTE 74, F		ERNS
MOUNDSVILLE	1004803493	MATTHEWS BODY SHOP	S HIGHLAND OFF RT 250	26041	RCRA-SQG, FINDS
MOUNDSVILLE	U003761288	J & R EXCAVATING/NO FORM	INTERSECTION OF RT 250 & 88	26041	WV UST
MOUNDSVILLE	1004619069	KLUG BROS INC	SOUTH LAFAYETTE AVENUE SR 2	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1000236189	CALGON CORP	MOUNDSVILLE US RT 2	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1000326592	OHIO POWER - MITCHELL PLANT	WV ROUTE 2	26041	PADS, RCRA-SQG, FINDS
MOUNDSVILLE	1000326591	OHIO POWER-KAMMER PLT	WV ROUTE 2	26041	PADS, RCRA-SQG, FINDS
MOUNDSVILLE	U003761298	HOWELL PROPERTY	US RT 20 & FOSTER LN	26041	WV LUST, WV UST
MOUNDSVILLE	U003546434	KOONTZ SERVICE STATION	WV RT 1	26041	WV UST
MOUNDSVILLE	U003437370	AMES DEPARTMENT STORE #0561	WV RT 2N, N LAFAYETTE EXT	26041	WV UST
MOUNDSVILLE	1000248726	ALLIED CHEM CORP MOUNDSVILLE WORKS	ST RT 2	26041	RCRA-SQG
MOUNDSVILLE	U003360688	COLUMBIA CHEMICAL CO	12 MI S OF MOUNDSVILLE RT 2	26041	WV UST
MOUNDSVILLE	1004803090	SHUTLERS WOODWORKING	3 MI S OF MOUNDSVILLE ON RT 2	26041	RCRA-SQG, FINDS
MOUNDSVILLE	1003866315	MOUNDSVILLE LANDFILL	4.2 MI S OF CO 17 ON 54	26041	CERC-NFRAP
MOUNDSVILLE	1000321889	MOUNTAINEER CARBON CO	STAR ROUTE @2 SOUTH	26041	RCRA-SQG, FINDS
MOUNDSVILLE	U003437340	MCELROY MINE	WV STATE RT 2	26041	WV UST
MOUNDSVILLE	U003437339	SHOEMAKER MINE	WV STATE RT 2	26041	WV UST
MOUNDSVILLE	U003437338	IRELAND MINE	WV STATE RT 2	26041	WV UST
MOUNDSVILLE	1004619222	IRELAND MINE CONSOL COAL CO	STATE RTE 2	26041	RCRA-SQG, FINDS
POWHATAN POINT	U000889569	CERTIFIED OIL CO. #344	RT 7	43942	OH LUST, OH ARCHIVE UST
POWHATAN POINT	S105854629	POWHATAN FUEL CENTER	381 HWY 7 N	43942	OH LUST, OH ARCHIVE UST
POWHATAN POINT	U000696444	BRUBAKER'S ASHLAND	ST RT 148	43942	OH LUST, OH UST, OH ARCHIVE US
POWHATAN POINT	S104774759	D & K EXCAVATING	ST RT 148	43942	OH LUST
WASHINGTON LANDS	1001204301	SHUTLER CABINET INC	OLD RT 2 2.75 MI S OF	26041	RCRA-SQG, FINDS

GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VENCO COKE FIRE SITE
ROUTE 2 SOUTH
MOUNDSVILLE, WV 26041

TARGET PROPERTY COORDINATES

Latitude (North):	39.83030 - 39° 49' 49.1"
Longitude (West):	80.8192 - 80° 49' 9.1"
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	515471.6
UTM Y (Meters):	4408728.5
Elevation:	654 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	39080-G7 POWHATAN POINT, WV
Most Recent Revision:	1984

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

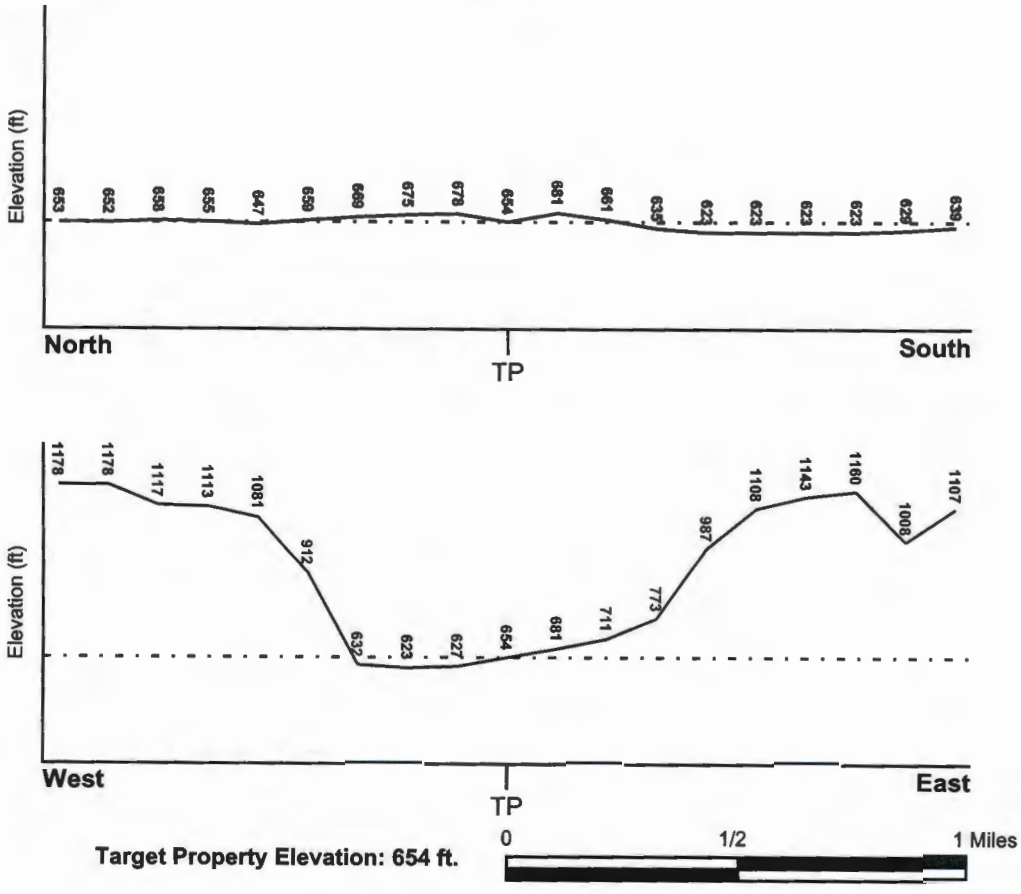
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
MARSHALL, WV	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 5401070042A

Additional Panels in search area:
5401070029A
5401070028A
5401070050A
3904040075B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
POWHATAN POINT	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Pennsylvanian
Series:	Virgilian Series
Code:	PP4 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	HUNTINGTON
Soil Surface Texture:	silt loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 4 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	11 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 5.60
2	11 inches	64 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 5.60
3	64 inches	74 inches	stratified	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 5.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loam
very stony - silt loam

Surficial Soil Types: loam
very stony - silt loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: silt loam
silty clay

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS2264311	0 - 1/8 Mile ENE
3	USGS2264252	1/8 - 1/4 Mile NE
B4	USGS2264326	1/4 - 1/2 Mile NNW
8	USGS2264280	1/2 - 1 Mile SSE
9	USGS2264344	1/2 - 1 Mile North
10	USGS2264267	1/2 - 1 Mile SSE
11	USGS2264262	1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

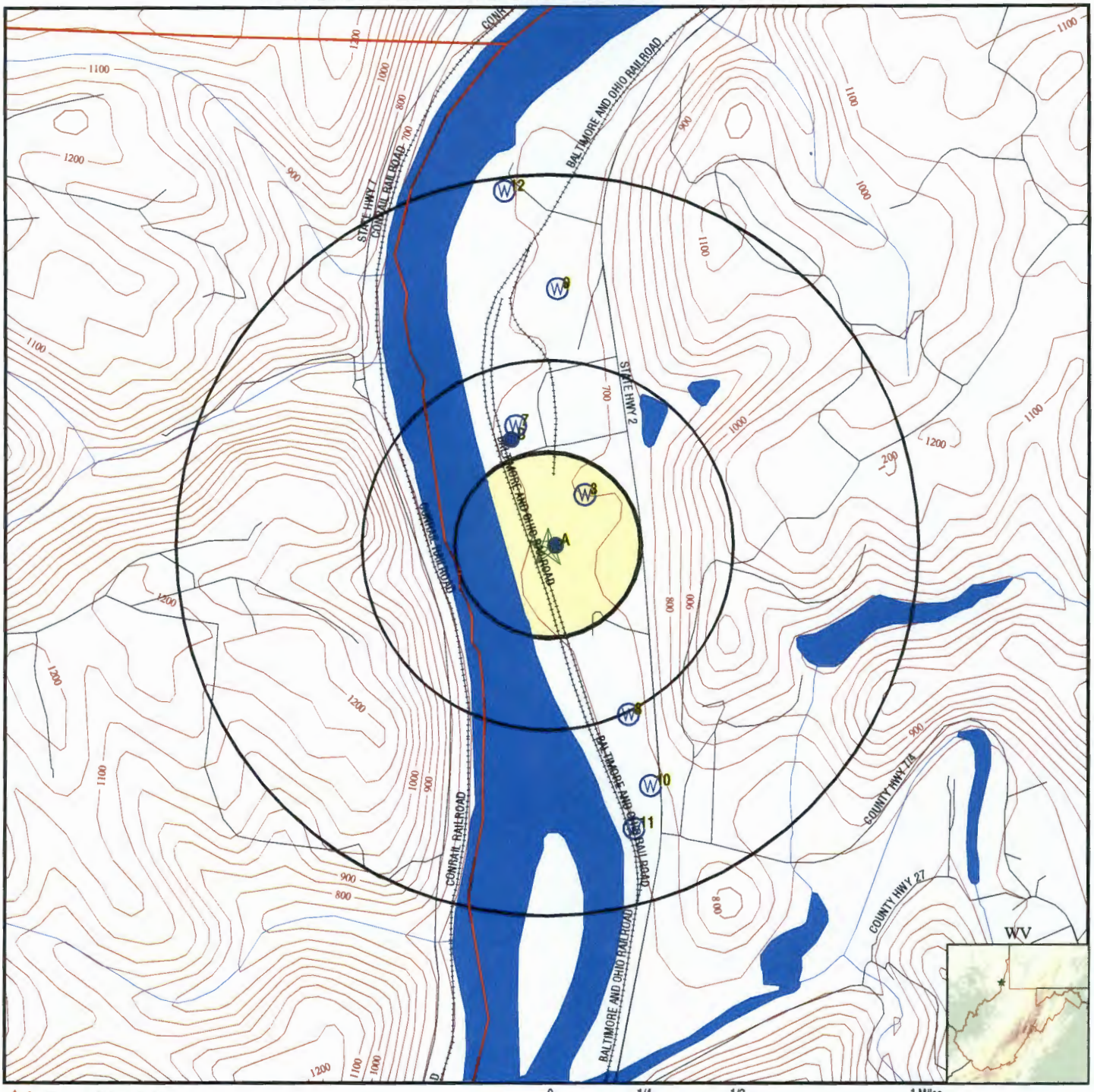
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	WVWELL1766	0 - 1/8 Mile South
B5	WVWELL1767	1/4 - 1/2 Mile NNW
B6	WVWELL0830	1/4 - 1/2 Mile NNW
7	WVWELL0831	1/4 - 1/2 Mile NNW
12	WVWELL1765	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 1672878.1s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME:	Venco Coke Fire Site	CLIENT:	Triad Engineering
ADDRESS:	Route 2 South Moundsville WV 26041	CONTACT:	Gary Hilgar
		INQUIRY #:	1672878.1s
LAT/LONG:	39.8303 / 80.8192	DATE:	May 16, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
A1	**WV WELLS**	**WVWELL1766**
South		
0 - 1/8 Mile		
Higher		

Id number:	830	Pwsid:	WV9925015
Sys name:	MITCHELL PLANT		
Facility id:	565978		
Fac name:	WELL #1		
City:	MOUNDSVILLE	County:	MARSHALL
Act status:	A	Water type:	Groundwater
Owner type:	Private	Daily prod:	0
Sys popula:	250	Sys type:	Non Transient Non Community
Latitude:	39.83	Longitude:	-80.819167
Elevation:	0	Updated:	Not Reported
Wdate:	Not Reported		
Descriptio:	Not Reported		
User initi:	Not Reported	Gudi statu:	No
Sourcetype:	Not Reported	Whp radius:	1500
Prod gpd:	12500	Conv facto:	50
Calc pop:	250	Seasonbegi:	Not Reported
Season end:	Not Reported	Facility type:	Well

A2		**FED USGS**	**USGS2264311**
ENE			
0 - 1/8 Mile			
Higher			
Agency cd:	USGS	Site no:	394950080490701
Site name:	Mal-0043		
Latitude:	394950		
Longitude:	0804907	Dec lat:	39.83063093
Dec lon:	-80.8184243	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	655.00	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19420101
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	100	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

3
NE
1/8 - 1/4 Mile
Higher

FED USGS **USGS2264252**

Agency cd:	USGS	Site no:	394903080490301
Site name:	Mal-0034		
Latitude:	394956		
Longitude:	0804903	Dec lat:	39.83229759
Dec lon:	-80.8173131	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	672.00	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19480101
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	113	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

B4
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS2264326**

Agency cd:	USGS	Site no:	395002080491701
Site name:	Mal-0102		
Latitude:	395002		
Longitude:	0804917	Dec lat:	39.83396418
Dec lon:	-80.82120215	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	POWHATAN POINT	Map scale:	24000
Altitude:	650.00	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Flood plain		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM		
Well depth:	83.0	Hole depth:	83.0
Source of depth data:	owner	Project number:	445405100
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1982-08-31
Water quality data end date:	1982-09-29	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

B5
NNW
1/4 - 1/2 Mile
Higher

WV WELLS **WVWELL1767**

Id number:	831	Pwsid:	WV9925018
Sys name:	CONOCO INC. VENTURE COKE CO. L.L.C.		
Facility id:	565981		
Fac name:	WELL #1		
City:	MOUNDSVILLE	County:	MARSHALL
Act status:	A	Water type:	Groundwater
Owner type:	Private	Daily prod:	0
Sys popula:	50	Sys type:	Non Transient Non Community
Latitude:	39.834722	Longitude:	-80.820833
Elevation:	0	Updated:	Not Reported
Wdate:	Not Reported		
Descriptio:	Not Reported		
User initi:	Not Reported	Gudi statu:	No
Sourcetype:	Not Reported	Whp radius:	750
Prod gpd:	2500	Conv facto:	50
Calc pop:	50	Seasonbegi:	Not Reported
Season end:	Not Reported	Facility type:	Well

B6
NNW
1/4 - 1/2 Mile
Higher

WV WELLS **WVWELL0830**

Id number:	2136	Pwsid:	WV9925018
Sys name:	CONOCO INC. VENTURE COKE CO. L.L.C.		
Facility id:	565981		
Fac name:	WELL #2		
City:	MOUNDSVILLE	County:	MARSHALL
Act status:	A	Water type:	Groundwater
Owner type:	Private	Daily prod:	0
Sys popula:	50	Sys type:	Non Transient Non Community
Latitude:	39.834722	Longitude:	-80.821111
Elevation:	0	Updated:	Not Reported
Wdate:	Not Reported		
Descriptio:	Not Reported		
User initi:	Not Reported	Gudi statu:	No
Sourcetype:	Not Reported	Whp radius:	750
Prod gpd:	2500	Conv facto:	50
Calc pop:	50	Seasonbegi:	Not Reported
Season end:	Not Reported	Facility type:	Well

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
7		
NNW	**WV WELLS**	**WVWELL0831**
1/4 - 1/2 Mile		
Higher		

Id number:	2137	Pwsid:	WV9925018
Sys name:	CONOCO INC. VENTURE COKE CO. L.L.C.		
Facility id:	565981		
Fac name:	WELL #3		
City:	MOUNDSVILLE	County:	MARSHALL
Act status:	A	Water type:	Groundwater
Owner type:	Private	Daily prod:	0
Sys popula:	50	Sys type:	Non Transient Non Community
Latitude:	39.835	Longitude:	-80.820833
Elevation:	0	Updated:	Not Reported
Wdate:	Not Reported		
Descriptio:	Not Reported		
User initi:	Not Reported	Gudi statu:	No
Sourcetype:	Not Reported	Whp radius:	750
Prod gpd:	2500	Conv facto:	50
Calc pop:	50	Seasonbegi:	Not Reported
Season end:	Not Reported	Facility type:	Well

8		
SSE	**FED USGS**	**USGS2264280**
1/2 - 1 Mile		
Higher		

Agency cd:	USGS	Site no:	394925080485501
Site name:	Mal-0038		
Latitude:	394925		
Longitude:	0804855	Dec lat:	39.82368664
Dec lon:	-80.81509095	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	675.00	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	90.0	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
9		
North	**FED USGS**	**USGS2264344**
1/2 - 1 Mile		
Higher		

Agency cd:	USGS	Site no:	395025080491501
Site name:	Mal-0044		
Latitude:	395025		
Longitude:	0804908	Dec lat:	39.840353
Dec lon:	-80.81870189	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	665.00	Altitude method:	M
Altitude accuracy:	20	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19170101
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	80.0	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
10		
SSE	**FED USGS**	**USGS2264267**
1/2 - 1 Mile		
Higher		

Agency cd:	USGS	Site no:	394915080485101
Site name:	Mal-0036		
Latitude:	394915		
Longitude:	0804851	Dec lat:	39.82090893
Dec lon:	-80.81397984	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	Not Reported	Map scale:	Not Reported
Altitude:	670.00	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	70.0	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

11
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS2264262**

Agency cd:	USGS	Site no:	394909080485401
Site name:	Mal-0101		
Latitude:	394909		
Longitude:	0804854	Dec lat:	39.81924227
Dec lon:	-80.81481325	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	54
State:	54	County:	051
Country:	US	Land net:	Not Reported
Location map:	POWHATAN POINT	Map scale:	24000
Altitude:	650.00	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Upper OhioWheeling. Ohio, Pennsylvania, West Virginia. Area = 1490 sq.mi.		
Topographic:	Flood plain		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM		
Well depth:	85.0	Hole depth:	85.0
Source of depth data:	owner	Project number:	445405100
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1982-08-12
Water quality data end date:	1982-09-29	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

12
North
1/2 - 1 Mile
Lower

WV WELLS **WVWELL1765**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Id number:	829	Pwsid:	WV9925013
Sys name:	KAMMER PLANT		
Facility id:	565976		
Fac name:	WELL #1		
City:	MOUNDSVILLE	County:	MARSHALL
Act status:	A	Water type:	Groundwater
Owner type:	Private	Daily prod:	0
Sys popula:	250	Sys type:	Non Transient Non Community
Latitude:	39.844167	Longitude:	-80.821389
Elevation:	0	Updated:	Not Reported
Wdate:	Not Reported		
Descriptio:	Not Reported		
User initi:	Not Reported	Gudi statu:	No
Sourcetype:	Not Reported	Whp radius:	1500
Prod gpd:	12500	Conv facto:	50
Calc pop:	250	Seasonbegi:	Not Reported
Season end:	Not Reported	Facility type:	Well

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 26041

Number of sites tested: 71.

Maximum Radon Level: 10.3 pCi/L.
Minimum Radon Level: 0.9 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
60 (84.51%)	10 (14.08%)	1 (1.41%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

West Virginia Water Well Information
Source: Bureau of Public Health
Telephone: 304-558-6765

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

Appendix 2

VENCO Coke Fire Response Reports

POLREP 1
VENCO COKE FIRE EMERGENCY RESPONSE
ROUTE 2 SOUTH
MOUNDSVILLE, MARSHALL COUNTY, WV 26041
EVENT: EMERGENCY RESPONSE - COKE FIRE, ADJACENT TO LDB OF OHIO RIVER, APPROXIMATE MP-112
ATTN: RRC

I. SITUATION (1600 HRS, WEDNESDAY, 11 FEBRUARY 2004)

A. AT APPROXIMATELY 1645 HOURS, 2/10/04, EPA REGION III, WHEELING OFFICE, WAS NOTIFIED BY THE NATIONAL RESPONSE CENTER OF AN ON-GOING FIRE OF GREEN PETROLEUM COKE AT THE VENCO FACILITY (OWNED BY CONOCO PHILLIPS) ALONG RT. 2 SOUTH OF MOUNDSVILLE, WV. THE NRC TOOK THE REPORT AT 1615 HOURS ON 2/10/04. ACCORDING TO THE NRC REPORT (NRC INCIDENT 712972), THE REPORTING PARTY, MS. ROSALYN MURZYN, REPORTED A GREEN PETROLEUM COKE (SOLID) CATCHING ON FIRE DUE TO UNKNOWN CAUSES. THE REPORT STATES THAT THE FIRE WAS FIRST DETECTED AT 0800 HOURS, 2/9/04.

B. AT 1650 HOURS, REGION 3 DUTY OFFICER PASSED THIS INFORMATION ON TO RESPONSE OSC DENNIS MATLOCK WHO DISPATCHED TO THE SCENE.

C. AT 1705 HOURS START WAS MOBILIZED TO THE SITE LOCATION TO PROVIDE TECHNICAL ASSISTANCE AS NECESSARY.

D. PERSONNEL ON SCENE: EPA - 1, START-1

E. WEATHER ON SCENE: OVERCAST, WINDS MODERATE AND VARIABLE, TEMPS IN THE LOW 30'S.

II. ACTIONS TAKEN

A. AT 1645 AND 1705 HOURS RESPECTFULLY, ONE EPA OSC AND ONE START MOBILIZED TO THE VENCO FACILITY ARRIVING ON SITE AT APPROXIMATELY 1750 HOURS AND MET WITH MS. ROSALYN MURZYN, ENVIRONMENTAL COORDINATOR, AND MR. RON BELL, SAFETY COORDINATOR FOR THE FACILITY. THE OSC AND START QUESTIONED MS. MURZYN ABOUT THE INCIDENT AS TO WHEN IT STARTED, HOW IT MAY HAVE STARTED, THEIR INTENDED ACTIONS TO EXTINGUISH THE FIRE, IF AIR MONITORING IS TAKING PLACE, AND OBTAINED AN MSDS ON THE PRODUCT. ACCORDING TO MS. MURZYN, IT IS UNKNOWN AS TO WHEN THE FIRE MAY HAVE BEGUN (IT COULD HAVE BEEN A WEEK AGO) OR AS TO IT'S ORIGIN. SHE STATED THAT IT MAY HAVE SPONTANEOUSLY COMBUSTED DUE TO TEMPERATURES, MOISTURE CONTENT, AND PARTICULATE SIZE. THE COMPANY PLANS TO PULL OUT THE REMAINING UNAFFECTED PART OF THE PILE WITH A FRONT LOADER, THEN USE WATER CANNONS TO DIRECT WATER SPRAY AT SMALL PORTIONS OF THE FIRE, COOLING IT UNTIL IT BECOMES A SOLID, THEN REMOVE IT FOR FURTHER DISPOSAL. IT IS ESTIMATED THAT IT MAY TAKE 2-3 WEEKS TO EXTINGUISH THE FIRE. THE FACILITY BELIEVES IT MAY BEGIN THE FIRE FIGHTING OPERATION AS EARLY AS THE AFTERNOON OF 2/11. MS. MURZYN STATED THE INCIDENT WAS NOT CALLED IN EARLIER TO THE NRC AS THEY WERE PERFORMING CALCULATIONS TO DETERMINE IF THEY MAY HAVE EXCEEDED THE RQ'S FOR EITHER NO2 OR SOX.

B. AT APPROXIMATELY 1900 HOURS THE OSC AND START MEMBER WERE ESCORTED TO THE BURNING PILE OF PETROLEUM-COKE. THE PILE IS APPROXIMATELY 50' HIGH AND 120' ACROSS THE BASE. THE COMPANY ESTIMATES THE VOLUME TO BE AROUND 5,000 TONS OF PETROLEUM-COKE PRODUCT. EXPOSED FIRE CAN BE NOTED IN SEVERAL AREAS ON THE SURFACE OF THE PILE WITH THE LARGEST NOTED AREA APPROXIMATELY COVERING 200 SQUARE FEET. UPON QUESTIONING OTHER FACILITY PERSONNEL, THE FIRE MAY HAVE BEEN FIRST DETECTED AS EARLY AS THE EVENING OF 2/6. COMPANY PERSONNEL WERE OBSERVED ACTIVELY AIR MONITORING FOR CO AND SO2 WITH A TMX 412. THEY HAD BEGUN

AIR MONITORING AT 0800 ON 2/10, DOING SO AT 2-HOUR INTERVALS AND INTEND TO KEEP THIS PROCESS UP. A COMPANY SAFETY SPECIALIST PROVIDED THE EPA WITH COPIES OF THE AIR MONITORING READINGS IT HAD RECORDED TO DATE. NONE OF THE READINGS EXCEEDED THE TLVS FOR CO OR SO2. THE FIRE WAS NOTED TO BE A VERY CLEAN BURN WITH NO VISIBLE BLACK SMOKE COMING OFF THE FIRE AREA. ONLY STEAM LIKE, WHITE SMOKE, WAS NOTED COMING OFF THE PILE. IT APPEARS VERY MUCH LIKE A CHARCOAL BRIQUETTE BURN IN A HOME BBQ PIT BUT ON A MUCH LARGER SCALE. AT APPROXIMATELY 1930 HOURS, THE OSC AND START DEPARTED THE FACILITY.

C. AT 1430 HOURS, 2/11, START SPOKE BY TELEPHONE WITH MS. MURZYN. SHE CONFIRMED THAT THEY HAD BEGUN THE EXTINGUISHING OPERATION TODAY. WHEN ASKED ABOUT POTENTIAL LIQUID RUNOFF FROM THE OPERATION, AND IF OILY RESIDUE MAY BE PRESENT, MS. MURZYN ASSURED START THAT ALL STORM WATER FROM THE FACILITY IS CAPTURED ON SITE AND PROCESSED THROUGH A SORT OF "CARBON-ACTIVATION FILTER SYSTEM" WHEREIN THEY UTILIZE FOUR RAILROAD CARS, LOADED WITH VARYING SIZED COKE, TO FILTER THE WATER THROUGH PRIOR TO DISCHARGE TO THE OHIO RIVER. SHE STATES THAT THE DISCHARGED PRODUCT DOES NOT EXCEED THEIR NPDES PERMIT ALLOWANCES AND DOES NOT INCLUDE OILY SHEEN.

D. ON WEDNESDAY, THE OSC AGAIN MOBED TO THE SITE TO OBSERVE THE FIREFIGHTING OPERATIONS. THE FIRE APPEARED TO BE THE SAME AS THE PREVIOUS EVENING. PLANT WORKERS HAD ENSURED THERE WAS SEPARATION FROM ADJACENT PILES OF UNAFFECTED COKE. ALL RUNOFF WATER FROM THE WATER HOSES WAS BEING CONTAINED.

III. FUTURE PLANS

A. IN COORDINATION WITH THE OSC, START INTENDS TO VISIT THE FACILITY ON THE A.M. OF 2/12 TO OBSERVE THE FIRE CONTROL OPERATIONS, OBTAIN A COPY OF THEIR NPDES PERMIT, INSPECT THEIR STORM-WATER TREATMENT SYSTEM, AND OBTAIN PHOTOGRAPHS OF THE INCIDENT WITH THE PERMISSION OF PLANT MANAGEMENT. THE FACILITY HAS BEEN FULLY COOPERATIVE WITH ALL REQUESTS ON BEHALF OF THE EPA TO DATE.

B. OSC AND START WILL CONTINUE TO EVALUATE THE FACILITY RESPONSE, DOCUMENTING THE PROCESS, UNTIL THE FIRE IS FULLY EXTINGUISHED. AIR MONITORING WILL BE CONDUCTED BY START AS NECESSARY.

_____

DENNIS MATLOCK, OSC
US EPA REGION III
WHEELING, WV

POLREP 2
VENCO COKE FIRE EMERGENCY RESPONSE
ROUTE 2 SOUTH
MOUNDSVILLE, MARSHALL COUNTY, WV 26041
EVENT: EMERGENCY RESPONSE - COKE FIRE, ADJACENT TO LDB OF OHIO RIVER, APPROXIMATE MP-112
ATTN: RRC

I. SITUATION (1600 HRS, THURSDAY, 12 FEBRUARY 2004)
- A. SEE POLREP 1 FOR BACKGROUND INFORMATION.
- B. PERSONNEL ON SCENE: EPA-1, START-1
- C. WEATHER ON SCENE: OVERCAST, WINDS LIGHT AND VARIABLE, TEMPS IN THE LOW 30'S.

II. ACTIONS TAKEN
- A. AT 0900 ONE START MEMBER MOBILIZED TO THE FACILITY AND MET WITH MS. ROSALYN MURZYN, THE FACILITY'S ENVIRONMENTAL COORDINATOR. MS. MURZYN PROVIDED START WITH A COPY OF THEIR CURRENT NPDES PERMIT AND ALLOWED START TO EXAMINE THEIR QUARTERLY SAMPLING RESULTS OVER THE PAST TWO COMPLETE YEARS. NO SAMPLING RESULTS EXCEEDED THEIR PERMIT ALLOWANCES. IN ADDITION, MS. MURZYN PROVIDED START WITH AN UPDATED VERSION OF THEIR ON-GOING AIR MONITORING EFFORTS IN AND AROUND THE BURN PILE. ALL RECORDINGS (CO & SO2) NOTED SINCE 1945 HOURS ON 2/10 ARE WELL BELOW ACTION LEVELS.
- B. AT APPROXIMATELY 0920 MS. MURZYN ESCORTED THE START MEMBER TO THEIR ON-SITE STORM WATER TREATMENT PLANT AT THE NORTHWEST AREA OF THEIR PROPERTY. THE SYSTEM CONSIST OF TO TWO LARGE COLLECTION BASINS AND FOUR OPEN RAILROAD CARS WHERE THEY PUMP THE WATER FROM THE COLLECTION BASINS TO THE TOP OF THE CARS WHICH ARE LOADED WITH RAW PETROLEUM-COKE. AFTER THE WATER IS FILTERED THROUGH THE RAILCARS, THE EFFLUENT IS DISCHARGED TO THE OHIO RIVER THROUGH THEIR OUTFALL NUMBER 003. SAMPLING OF THIS EFFLUENT IS CONDUCTED ON A ROUTINE BASIS BY FACILITY PERSONNEL. START ALSO EXAMINED THE OUTFALL ITSELF WHEREIN IT FLOWS TO THE OHIO RIVER AT APPROXIMATELY MP-111.8. THERE WAS NO EVIDENCE OF SHEEN PRESENT.
- C. START ALSO WITNESSED THE FACILITIES ON-GOING FIRE FIGHTING EFFORTS ON THE SUBJECT COKE PILE. MUCH OF THE PILE THAT WAS NOT BURNING HAS BEEN REMOVED BY FRONT LOADERS. THE FACILITY HAS SET UP A 2.5 INCH FIRE HOSE UNMANNED MONITOR CONTINUOUSLY SPRAYING A STREAM FLOW ONTO THE PILE THEREBY COOLING THE HOT SPOTS. START WAS UNABLE TO DETECT ANY EVIDENCE OF ACTIVE FIRE ON THE SURFACE AREAS THAT HAD BEEN EVIDENT ON THE EVENING OF 2/10. NO OBSERVABLE SMOKE WAS NOTED COMING OFF THE PILE BUT A SIGNIFICANT AMOUNT OF STEAM (WHITE SMOKE) WAS NOTED FROM MANY LOCATIONS THROUGHOUT THE PILE. IT IS ESTIMATED THE OVERALL PILE SIZE HAS BEEN REDUCED BY APPROXIMATELY 30% SINCE 2/10. MS. MURZYN COLLECTED SEVERAL DIGITAL PHOTOS OF THE FIRE FIGHTING EFFORTS AND WILL PROVIDE THEM TO START VIA E-MAIL. NO OUTSIDE PHOTOGRAPHY IS ALLOWED ON THE PROPERTY.

III. FUTURE PLANS
- A. THE EPA AND START WILL COORDINATE TO PROVIDE NEAR DAILY VISITS TO THE FACILITY TO NOTE PROGRESS ON THE FIRE FIGHTING. THE FACILITY CONTINUES TO BE FULLY COOPERATIVE WITH ALL REQUESTS ON BEHALF OF THE EPA TO DATE.

B. AIR MONITORING WILL BE CONDUCTED BY START TO COLLABORATE THE FACILITIES READINGS UTILIZING A MULTI-WARN SENSOR.

DENNIS MATLOCK, OSC
US EPA REGION III
WHEELING, WV

POLREP 3 AND FINAL
VENCO COKE FIRE EMERGENCY RESPONSE
ROUTE 2 SOUTH
MOUNDSVILLE, MARSHALL COUNTY, WV 26041
EVENT: EMERGENCY RESPONSE - COKE FIRE, ADJACENT TO LDB OF OHIO RIVER, APPROXIMATE MP-112
ATTN: RRC

I. SITUATION (1600 HRS, MONDAY, 16 FEBRUARY 2004)
- A. SEE POLREP 1 FOR BACKGROUND INFORMATION.
- B. PERSONNEL ON SCENE: START-1
- C. WEATHER ON SCENE: SUNNY, WINDS LIGHT TO MODERATE FROM THE SOUTH, TEMPS IN THE LOW 30'S.

II. ACTIONS TAKEN
- A. AT 0915, 2/13/04, ONE START MEMBER MOBILIZED TO THE FACILITY AND MET WITH MS. ROSALYN MURZYN, THE FACILITY'S ENVIRONMENTAL COORDINATOR.
- B. AT APPROXIMATELY 0930 MS. MURZYN ESCORTED THE START MEMBER TO THE FACILITIES ON-GOING FIRE FIGHTING EFFORTS ON THE SUBJECT COKE PILE. THE FACILITY HAS SET UP TWO 2.5 INCH FIRE HOSES UTILIZING UNMANNED MONITORS THAT WERE CONTINUOUSLY SPRAYING A STREAM FLOW ONTO THE PILE THEREBY COOLING ANY REMAINING HOT SPOTS. AS STATED IN POLREP 2, NO OBSERVABLE SMOKE WAS NOTED COMING OFF THE PILE BUT ONLY STEAM (WHITE SMOKE) WAS STILL EVIDENT. IT IS ESTIMATED THE OVERALL PILE SIZE HAD BEEN REDUCED BY APPROXIMATELY 70-80% SINCE 2/10.
- C. FACILITY CREWS WERE OBSERVED USING TWO LARGE FRONT-LOADERS TO PULL OFF THE COOLED PRODUCT AND RELOCATE IT ELSEWHERE ON THE FACILITY PROPERTY. MS. MURZYN STATED THAT THE OPERATION WAS GOING MUCH BETTER THAN EXPECTED AND SHE EXPECTED THE FIRE WOULD BE COMPLETELY OVER, AND THE PILE REMOVED BY 2/14 AT THE LATEST.
- D. START AGAIN QUESTIONED MS. MURZYN ABOUT THE ORIGINAL PILE SIZE AND MORE SPECIFICALLY ABOUT THE PART ON FIRE. MS. MURZYN STATED THAT THE ORIGINAL PILE SIZE WAS APPROXIMATELY 12,000 TONS, OF WHICH ABOUT 5,000 TONS WERE "AT RISK" FROM THE FIRE. HOWEVER, THE FIRE ACTUALLY IMPACTED A MUCH LOWER NUMBER THAN WHAT WAS AT RISK. START ALSO CONDUCTED AIR MONITORING, UTILIZING A DRAEGER MULTI-WARN, FOR CO AND SO2 AND ZERO READINGS WERE NOTED FOR BOTH IN CLOSE PROXIMITY TO THE WEST SIDE OF THE PILE.
- E. AT 1145, 2/16/04, START AGAIN CONTACTED MS. MURZYN, BY TELEPHONE, ASKING FOR AN UPDATE OF THE SITUATION. MS. MURZYN STATED THAT THE FIRE WAS OUT BY 1900 HOURS ON 2/13/04 AND THAT THEY WOULD BE DOING ROUGH CALCULATIONS TO DETERMINE APPROXIMATELY HOW MUCH SO2 AND NOX MAY HAVE BEEN EMITTED DURING THE FIRE. HOWEVER, THIS INFORMATION WOULD NOT BE READILY AVAILABLE FOR AN UNDETERMINED TIME.

III. FUTURE PLANS
- A. NO FURTHER EPA INVOLVEMENT ANTICIPATED AS THE FIRE HAS BEEN FULLY EXTINGUISHED.

_____
DENNIS MATLOCK, OSC
US EPA REGION III
WHEELING, WV

NATIONAL RESPONSE CENTER - FLASH FAX
xxxGOVERNMENT USE ONLYxxxGOVERNMENT USE ONLYxxx
DO NOT RELEASE this information to the public without
permission from the NATIONAL RESPONSE CENTER 1-800-424-8802

Incident Report # 712972

(121068)

INCIDENT DESCRIPTION

xReport taken by: CIV THREATT at 16:15 on 10-FEB-04
Incident Type: FIXED
Incident Cause: UNKNOWN
Affected Area:
REGIONAL CASE NUMBER WV040075
The incident was discovered on 09-FEB-04 at 08:00 local time.
Affected Medium: AIR ATMOSPHERE, ASPHALT

REPORTING PARTY

Name: ROSALYN MURZYN
Organization: VENCO
Address: ROUTE 2 S.
MOUNDSVILLE, WV 26041
VENCO called for the responsible party.
PRIMARY Phone: (304)8430245
Type of Organization: PRIVATE ENTERPRISE

SUSPECTED RESPONSIBLE PARTY

Name: ROSALYN MURZYN
Organization: VENCO
Address: ROUTE 2 S.
MOUNDSVILLE, WV 26041
PRIMARY Phone: (304)8430245
Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

ROUTE 2 S. County: MARSHALL
City: MOUNDSVILLE State: WV Zip: 26041

RELEASED MATERIAL(S)

CHRIS Code: NCC Official Material Name: NO CHRIS CODE
Also Known As: BURNED GREEN PETROLEUM COKE
Qty Released: 0 UNKNOWN AMOUNT
CHRIS Code: NCC Official Material Name: NO CHRIS CODE
Also Known As: NITROGEN OXIDE
Qty Released: 0 UNKNOWN AMOUNT
CHRIS Code: SFD Official Material Name: SULFUR DIOXIDE
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT

Cc: C Fuller 3AP12
J Stoenaker 3HS33
C Dougherty 3HS33

DESCRIPTION OF INCIDENT

REPORTING GREEN PETROLEUM COKE (SOLID) CATCHING ON FIRE DUE TO UNKNOWN CAUSES.

INCIDENT DETAILS

Building ID:
Type of Fixed Object: OTHER
Power Generating Facility: NO
Generating Capacity:
Type of Fuel:

REVIEWED BY: see pg 3 [illegible]
DATE:
faxed to OSC M. Easton

NPDES:
NPDES Compliance: UNKNOWN

DAMAGES

Fire Involved: YES Fire Extinguished: NO
INJURIES: Hospitalized: Empl/Crew: Passenger:

FATALITIES: Empl/Crew: Passenger: Occupant:
EVACUATIONS: Who Evacuated: Radius/Area:
Damages:

Closure Type	Description of Closure	Hours Closed	Direction of Closure
Air: N			
Road: N			Major Artery: N
Waterway: N			
Track: N			

Media Interest: NONE Community Impact due to Material: NO

REMEDIAL ACTIONS

PROCESS OF GETTING THE MATERIAL NOT ON FIRE AWAY FROM THE AREA, CLEAN UP UNDERWAY, INVESTIGATION UNDERWAY
Release Secured: NO
Release Rate:
Estimated Release Duration:

WEATHER

Weather: PARTLY CLOUDY, 32:F

ADDITIONAL AGENCIES NOTIFIED

Federal:
State/Local: AIR QUALITY, LEPC
State/Local On Scene:
State Agency Number: NO REPORT #

NOTIFICATIONS BY NRC

U.S. EPA III
(215)8149016
NOAA 1ST CLASS BB RPTS FOR WV
10-FEB-04 16:22 (206)5266344
NATIONAL RESPONSE CENTER HQ
(202)2672100
ORSANCO ATTN: J. SCHULTE
10-FEB-04 16:22 (513)2317719
OH EPA ATTN: DUTY OFFICER
10-FEB-04 16:22 (614)2240946
PA EMERG MGMT AGCY ATTN:J. BAHNWE
10-FEB-04 16:22 (717)6512001
✓WEST VIRGINIA DEP
10-FEB-04 16:22 (304)3401647
✓WV DEP ATTN: DUTY OFFICER
10-FEB-04 16:22 (304)5585989
✓WV DEP SPILL LINE
10-FEB-04 16:22 (304)4651919

ADDITIONAL INFORMATION
CALLER STATES THIS FIRE WILL POSSIBLY LAST A MONTH. 5000 TONS OF THE MATERIAL ARE AT RISK. CONSIDERING THE OUTCOME OF THIS RELEASE MANY SAFETY PRECAUTIONS HAVE TO BE PERFORMED BEFORE ACTUALLY GETTING RID OF THE FIRE.

xxx END INCIDENT REPORT 712972 xxx
Report any problems or fax number changes by calling 1-800-424-8802
PLEASE VISIT OUR WEB SITE AT http://www.nrc.uscg.mil

2-10-04

4:4[illegible] WVDEP already notified 2/10/04
Duty officer contacted Perco
4:50 Duty Officer contacted OSC Dennis Matlock.
Dennis Matlock on START responded.
Product is Calcine (Pelletized Coal & other ~~Coke~~ ~~type~~ compounds)
is still on fire. OSC Matlock will
continue to monitor site. Plans to
follow — M. Caster —

FINAL MONTHLY SUMMARY REPORT

Project Name: Venco Coke Fire

TDD Number: SW3-04-02-0003

LOE Ceiling: 80

Amendment: N/A

LOE as of 01/31/04:

Completion Date: 2/29/04

LOE Percent as of 01/31/04: %

Job Number: 001262.0436.01RZ

EPA WAM: Dennis Matlock

Cost Ceiling: $6,690

Project Director: Drew Wojtanik

Cost as of 01/31/04:

Project Manager: Joe Carter

Cost Percent as of 01/31/04:

Descriptive Paragraph:

On February 10, 2004, START was dispatched to an emergency response involving a fire of a petroleum-coke stockpile at the Venco Calcining Facility in Moundsville, WV. START met with the OSC on scene and the facility's Environmental Coordinator, to evaluate the situation, and obtain information regarding the fire and potential off-gassing of hazardous materials. START followed up this visit with two additional visits to monitor the progress the facility was making regarding extinguishing the fire. START also inspected the facility's outfall to the Ohio River as well as it's on site water treatment system. START obtained a copy of the facility's air monitoring information and conducted confirmatory air monitoring for CO and HS2, as well as an MSDS for the product, and a copy of the facility's NPDES permit. START assisted the OSC in drafting three POLREPs on the response. START also provided written documentation and obtained photo-documentation from the facility as they did not allow any photography from outside sources. START conducted all activities well under budget for both dollars and hours. This concludes all activities under this TDD and it is closed to file.

WAM Comments/Concurrence:

cc: **PO**
PD
START L

Appendix 3

Green Petroleum Coke MSDS

CO 350

Premcor

Material Safety Data Sheet

NFPA	HCS Risk Phrases	Protective Clothing
	HCS CLASS: Combustible solid.	

Section I. Chemical Product and Company Identification

Common Name/ Trade Name	**Petroleum Coke, Green (Anode Grade)**	**MSDS #**	PR0027
Manufacturer	The Premcor Refining Group Inc. 8182 Maryland Avenue Clayton, MO 63105	**CAS#**	64741-79-3
Synonym	Delayed Process Petroleum Coke (Anode Grade); Pet Coke (Anode Grade); Coke (Anode Grade); **Pet Coke Grades A, B, C, D and E.**	**In case of Emergency**	CHEMTREC Emergency: 1-800-424-9300
Chemical Name	Petroleum Coke, Green	**MSDS Information**	MSDS Distribution Coordinator: (314) 854-9696 ext. 550
Chemical Family	Solid carbonanceous material.		
Chemical Formula	Carbonaceous material and some hydrocarbons having a high carbon-to-hydrogen ration.		
Material Uses	Industrial applications: A higher quality grade of petroleum coke that is used as a raw material for the manufacture of anode rod materials.		

Section II.Composition and Information on Ingredients

Name	CAS #	% Comp	TLV/PEL	LC_{50}/LD_{50}
Petroleum Coke, Green (Anode Grade)	64741-79-3	100	**TWA (total):** 15 (mg/m³), **TWA (respirable):** 5 (mg/m³) from OSHA [1989].	Not available.
Volatiles (High MW Hydrocarbons, PAHs)	Mixture	<12.5	**TWA:** 0.2 (mg/m³) from OSHA [1989].	Not available.
Moisture (Water)	7732-18-5	<12	Not available.	Not available.
Sulfur	7704-34-9	<4%	**TWA (total):** 15 (mg/m³), **TWA (respirable):** 5 (mg/m³) from OSHA/NIOSH [1989].	Not available.
Ash	Mixture	<0.4	Not available.	Not available.
Silicon	7440-21-3	<0.035	**TWA (total):** 10 (mg/m³), **TWA (respirable):** 5 (mg/m³) from OSHA/NIOSH [1989].	Not available.
Vanadium	1314-62-1	<0.045	**TWA:** 0.05 (mg/m³) from OSHA [1989].	**ORAL (LD50)** mg/kg: Acute: 10 (Rat). 5 (Mouse).
Iron	1309-37-1	<0.035	**TWA:** 10 (mg/m³) from OSHA [1989].	Not available.
Nickel	1313-99-1	<0.04	**TWA:** 1 (mg/m³) from OSHA [1989].	**DERMAL (LD50)** mg/kg: Acute: 50 (Mouse).
Note: Specific PAHs of OSHA and EPA reporting concern are non-detected or below their reporting thresholds in this product. See Sections VIII (OSHA) and XVI (EPA) for listings of these specific PAHs.				

Continued on Next Page

Section III. Hazards Identification

Potential Acute Health Effects	INHALATION: Breathing the dust at concentrations that exceed the recommended exposure standard may be irritating to the respiratory tract. Symptoms of heavy inhalation include: sneezing, irritation of the nose and throat, coughing, pulmonary edema and a densely black mucous discharge from the nose. INGESTION: This material is not anticipated to have any toxic effect upon ingestion. The only effects would be the mechanical damage produced by swallowing indigestable, solid chunks of the material. SKIN CONTACT: Expected to cause no more than minor skin irritation. The material may be abrasive. EYE CONTACT: This substance may cause eye irritation due to the abrasive action of the dust. The degree of the injury will depend on the amount of the material that gets into the eye and the speed and thoroughness of the first aid treatment.
Potential Chronic Health Effects	After long-term exposure to concentrations above the safe limits, this product may cause a PNEUMOCONIOSIS condition ("bronchitis") and/or FIBROSIS ("lung scarring") by mechanical action. This product may contain varying amounts of **polynuclear aromatic hydrocarbons (PAHs)** which have been shown to cause SKIN CANCER after prolonged contact with the skin of test animals. Brief or intermittent skin contact is not expected to have any adverse effects if it is washed from the skin. **NOTE: Petroleum Coke generally has less quantities of PAH-containing coal tar pitch volatiles, silicaceous material, metal contaminants, etc. than are found in coal materials mined from the earth. Thus, it is considered less hazardous than conventional coal used in coke ovens, etc.**

Section IV. First Aid Measures

Eye Contact	Avoid contact with the eyes. If material gets in the eye(s), remove the victim from the source of contamination and take to the nearest eye wash, shower or other source of clean water. Gently brush or wipe away any dust remaining on the face. Have the victim remove contact lenses if he/she is wearing them. Gently rinse the affected eye(s) with clean, lukewarm water until the pain is gone for 2 or 3 minutes. Have the victim lie or sit with head back. Hold the eyelid(s) open and pour water slowly over the eyeball(s) at the inner corners, letting the water run out the outer corners. Ask the victim to look up, down and side to side as you rinse in order to better reach all parts of the eye(s). Arrange for transport to the nearest medical facility for examination and treatment by a physician. **DO NOT let the victim rub his/her eyes.** DO NOT introduce oil or ointment into the eye(s) without medical advice.
Skin Contact	Avoid contact with skin. No effect is anticipated from brief skin exposure. Wash off with mild soap and water.
Hazardous Skin Contact	Remove the victim from the source of contamination. Remove contaminated clothing. Wet the clothing first to keep down the dust. Wash affected areas with soap and water. Rinse carefully. Dry gently. Get clean, dry clothes for the victim. DO NOT shake or blow dust off clothing or the body.
Inhalation	Harmful if inhaled. If high concentrations of the dust are present, the worker should wear as a mimimum an APPROPRIATE NEGATIVE PRESSURE/CARTRIDGE RESPIRATOR.
Hazardous Inhalation	Remove the victim from the contaminated area while protecting yourself, if necessary, from exposure by wearing an appropriate respirator. Put a similar respirator on the victim. If no respirators are available, remove the victim to fresh air as quickly as possible. After getting the victim to a safe area, remove contaminated clothing and equipment. Encourage the victim to cough, spit out and blow the nose to remove dust. CONSULT A PHYSICIAN FOR FOLLOW-UP.
Ingestion	DO NOT ingest. If petroleum coke solids enter the mouth, spit out and rinse with water.
Hazardous Ingestion	Not expected to be an ingestion problem, no first aid procedures are required. In case of intentional ingestion, seek medical advice on whether the stomach contents should be emptied.

Continued on Next Page

Section V. Fire and Explosion Data

Flammability of the Product	Combustible.
Auto-Ignition Temperature	Not available
Flash Points	Not available.
Flammable Limits	Minimum Flammable Concentration: 125 g/m3 (mass median diameter 15 microns) [NFPA 68 (1998), Table E-2, Carbonaceous Dusts]
Products of Combustion	Carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Very slightly to slightly flammable in presence of open flames and sparks, of oxidizing materials. Non-flammable in presence of shocks, of heat (<200 F), of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis, of moisture.
Explosion Hazards in Presence of Various Substances	As an undisturbed solid material, it is not considered as a product presenting risks of explosion. **However, petroleum coke dusts in a high enough concentration are subject to combustion or explosion upon contact with sparks, open flames, or temperatures in excess of 1000 F (570C). Any potential of sparking or ignition should be moved prior to pulverizing or other process resulting in dust generation.**
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Special Remarks on Fire Hazards	No additional remark.
Special Remarks on Explosion Hazards	No additional remark.

Section VI. Accidental Release Measures

Small Spill	Use appropriate tools (e.g. shovel, small front end loader, etc.) to put the spilled solid in a convenient waste disposal container. Dispose of according to local and regional authority requirements. If possible, avoid disposal by reclaiming/recycling the material.
Large Spill	Use appropriate equipment (e.g. heavy front-end loader, dozer, etc.) to reclaim the spilled material in a container (e.g. covered semi trailer). Dispose of according to local and regional authority requirements. To prevent dusting during strong winds, keep substance damp using water spray. Prevent entry into sewers to avoid clogging.

Section VII. Handling and Storage

Precautions	Avoid contact with skin and eyes. DO NOT breathe dust. After handling, always wash hands thoroughly with soap and water. Ensure that eyewash station and safety shower is proximal to the work-station location. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of dusts below their respective threshold limit value.
Storage	Combustible materials should be stored away from flames, sparks, extreme heat and away from strong oxidizing agents.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate excessive levels of dust, use ventilation (general and/or local exhaust) to keep exposure to airborne contaminants below the exposure limit. Ensure ventilation equipment design considers the potential for DUST EXPLOSION.
Personal Protection	Chemical Goggles. Protective gloves (cotton for dry coke, flock-lined nitrile for wet coke). A respirator is not normally required. In the event dust concentrations are excessive, a NIOSH approved negative pressure respirator equipped with HEPA cartridges should be worn.
Personal Protection in Case of a Large Spill	Personnel should never enter areas of excessive dust concentrations without proper respiratory protection. Provide NIOSH approved negative pressure respirator equipped with HEPA cartridges. Where air concentrations exceed the respirator's cartridge limits or protection factor, an air-supplied respirator or SCBA must be provided. Wear gloves (cotton for dry coke, flock-lined nitrile for wet coke), boots (safety shoes dry, PVC or neoprene wet), and a full chemical suit (spunbound fabric suit for dry coke, PVC or neoprene suit for wet coke). Wear splash goggles when a full-facepiece respirator is not used.

Continued on Next Page

Exposure Limits	**Petroleum Coke Dust (Particulates Not Otherwise Classified)** TWA: (Total): 15 (Respirable): 5 (mg/m^3) from OSHA [1989] **Coal Tar Pitch Volatiles (PAH-Containing)** TWA: 0.2 (mg/m^3) from OSHA [1989] OSHA 58 analyzes for the following PNAs: Anthracene, Phenanthrene, Chrysene, Pyrene and Benzo Alpha Pyrene. ACGIH TLV adds the following: Benzo Alpha Anthracene, Benzo Beta Fluoranthene and Acridine. **Vanadium (as V2O5)** TWA (Respirable): 0.05 (mg/m^3) from OSHA [1989] **Nickel, metal (as Ni)** TWA: 1 (mg/m^3) from OSHA [1989] **Iron Oxide (as Fe)** TWA: 10 (mg/m^3) from OSHA [1989]. Consult local authorities for acceptable exposure limits.

Section IX. Physical and Chemical Properties

Physical state and appearance	Solid. (Irregular black chunks. Looks like "coal".)	**Odor**	Very slight oil/sulfur odor. (Slight.)
Molecular Weight	Not available.	**Taste**	Not available.
pH (1% soln/water)	Not applicable.	**Color**	Black. (Dark.)
Boiling Point	4204.4°C (7599.9°F)		
Melting Point	3482.2°C (6300°F)		
Critical Temperature	Not available.		
Specific Gravity	0.8 - 1.0		
Vapor Pressure	Not available.		
Vapor Density	Not available.		
Volatility	11% (w/w).		
Odor Threshold	Not available.		
Evaporation rate	Not available.		
Viscosity	Not available.		
Water/Oil Dist. Coeff.	0		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, methanol, diethyl ether, n-octanol, acetone.		
Solubility	Partially soluble in methanol, diethyl ether, n-octanol, acetone. Insoluble in cold water, hot water.		

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Very slightly to slightly reactive with oxidizing agents.
Corrosivity	Not considered to be corrosive for metals and glass.

Continued on Next Page

Special Remarks on Reactivity	No additional remark.
Special Remarks on Corrosivity	No additional remark.

Section XI. Toxicological Information

Routes of Entry	Inhalation.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	The substance is toxic to lungs. Long-term exposure to high concentrations of the dust may lead to a PNEUMOCONIOSIS condition ("bronchitis") or FIBROSIS ("scarring of the lung tissue") by mechanical action.
Other Toxic Effects on Humans	This product may contain varying amounts of **polynuclear aromatic hydrocarbons (PAHs)** which have been shown to cause SKIN CANCER after prolonged contact with the skin of test animals. Brief or intermittent skin contact is not anticipated to have any adverse effects if it is washed from the skin. **Although not present in amounts believed to be significant enough to cause adverse effects, the following summarizes the potential health effects:** Repeated exposures to **vanadium oxides** may lead to CHRONIC BRONCHITIS, GREEN TONGUE, CONJUNCTIVITIS (Eyes), PHARYNGITIS (Throat), RHINITIS (Nose), RALES (Chest), CHRONIC PRODUCTIVE COUGH and ALLERGIC DERMATITIS (Skin). Repeated exposures to **nickel oxides** may cause a CHRONIC BRONCHITIS, RHINITIS, SINUSITIS, DERMATITS and LUNG or NASAL CANCER. Repeated exposures to **iron oxides** may cause a benign (i.e. harmless) pneumoconiosis known as SIDEROSIS.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on other Toxic Effects on Humans	No additional remark.

Section XII. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Not applicable.
Toxicity of the Products of Biodegradation	Not applicable.
Special Remarks on the Products of Biodegradation	No additional remark.

Section XIII. Disposal Considerations

Waste Disposal	Use appropriate tools (e.g. shovel, front end loader, etc.) to put the spilled solid in a convenient waste disposal container. Recycle to process, if possible. Consult your local or regional authorities.

Continued on Next Page

Section XIV. Transport Information

DOT	Not available.
Proper Shipping Name	None (Non-Hazardous)
Hazard Class	Not a DOT controlled material (United States).
Identification Number	Not applicable (PIN and PG).
Packing Group	NONE
Hazardous Substances Reportable Quantities	Not available.
Special Provisions for Transport	**Forbidden for shipment when HOT.**
Marine Pollutant	Not pollutant.

Marine Pollutant (Pictograms)

DOT (Pictograms)

Section XV. Other Regulatory Information and Pictograms

Federal Regulations

TSCA 8(b) inventory: Vanadium Oxide; Iron Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons
TSCA 8(c) calls for record of SAR: Vanadium Oxide; Iron Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: Vanadium Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons
SARA 302/304/311/312 hazardous chemicals: Vanadium Oxide; Nickel Oxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Vanadium Oxide: immediate health hazard, delayed health hazard; Iron Oxide: immediate health hazard; Nickel Oxide: immediate health hazard, delayed health hazard; Polynuclear Aromatic Hydrocarbons: delayed health hazard

SARA 313 toxic chemical notification and release reporting: Nickel Oxide: 10000 lbs. (4536 kg), 0.1%; Polynuclear Aromatic Hydrocarbons: 10000 lbs. (4536 kg), 0.1%

Clean water act (CWA) 307: Nickel Oxide; Polynuclear Aromatic Hydrocarbons

CERCLA: Hazardous substances.: Vanadium Oxide: 1000 lbs. (453.6 kg); Nickel Oxide: 1 lbs. (0.4536 kg); Polynuclear Aromatic Hydrocarbons: 1 lbs. (0.4536 kg);

Clean water act (CWA) 311: Vanadium Oxide

Clean air act (CAA) 112 accidental release prevention: Vanadium Oxide; Nickel Oxide

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: Vanadium Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons

State Regulations

Pennsylvania RTK: Vanadium Oxide; Iron Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons
Florida: Vanadium Oxide; Nickel Oxide
Minnesota: Vanadium Oxide; Nickel Oxide
Massachusetts RTK: Vanadium Oxide; Iron Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons
New Jersey: Vanadium Oxide; Iron Oxide; Nickel Oxide; Polynuclear Aromatic Hydrocarbons

Continued on Next Page

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Nickel Oxide
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Nickel Oxide; Polynuclear Aromatic Hydrocarbons

National Fire Protection Association (U.S.A.)

Health

Fire Hazard

Reactivity

Specific hazard

NFPA Hazard Ratings:

0 - Minimal
1 - Slight
2 - Moderate
3 - Serious
4 - Severe

Protective Clothing (Pictograms)

PPE DESCRIPTION:

See Section VIII for specific materials of PPE construction.

Section XVI. Other Information

References

Micromedex, Inc., Tomes Plus, Vol. 26, Exp. 7/31/96.
First Aid Manual for Chemical Accidents, 2nd ed, Van Nostrand Reinhold, 1989
American Petroleum Institute (API), Petroleum Process Stream Terms Included in the Chemical Substances Inventory Under the Toxic Substances Control Act (TSCA), 1983.
Clark Refining & Marketing, Inc., Hartford Refinery, Gas and Liquid Sample Laboratory Analysis Reports, 1996.

Other Special Considerations

Under Sara 313, EPA lists the following specific PNAs as applicable to the category of "PNAs": Benz(a)anthracene, Benzo(a)phenanthrene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Benzo(k)fluoranthene, Benzo(rst)pentaphene, Dibenz(a,h)acridine, Dibenz(a,j)acridine, Dibenzo(a,h)anthracene, Dibenzo(a,e)fluoranthene, Dibenzo(a,e)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene, 7H-Dibenzo(c,g)carbazole, 7,12-Dimethylbenz(a)anthracene, Indeno[1,2,3-cd]pyrene, 5-Methylchrysene and 1-Nitropyrene.

Validated by SysAdm on 10/4/99.

Verified by SysAdm.

Printed 4/30/2001.

CHEMTREC Emergency:
1-800-424-9300

MSDS Distribution Coordinator:
(314) 854-9696 ext. 550

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Appendix 4

2004 Coke Fire Photographs

Photograph 1 – Venco Coke Fire; February 2004.

Photograph 2 – Venco Coke Fire; February 2004.

Photograph 3 – Venco Coke Fire; February 2004.

Photograph 4 – Venco Coke Fire; February 2004.

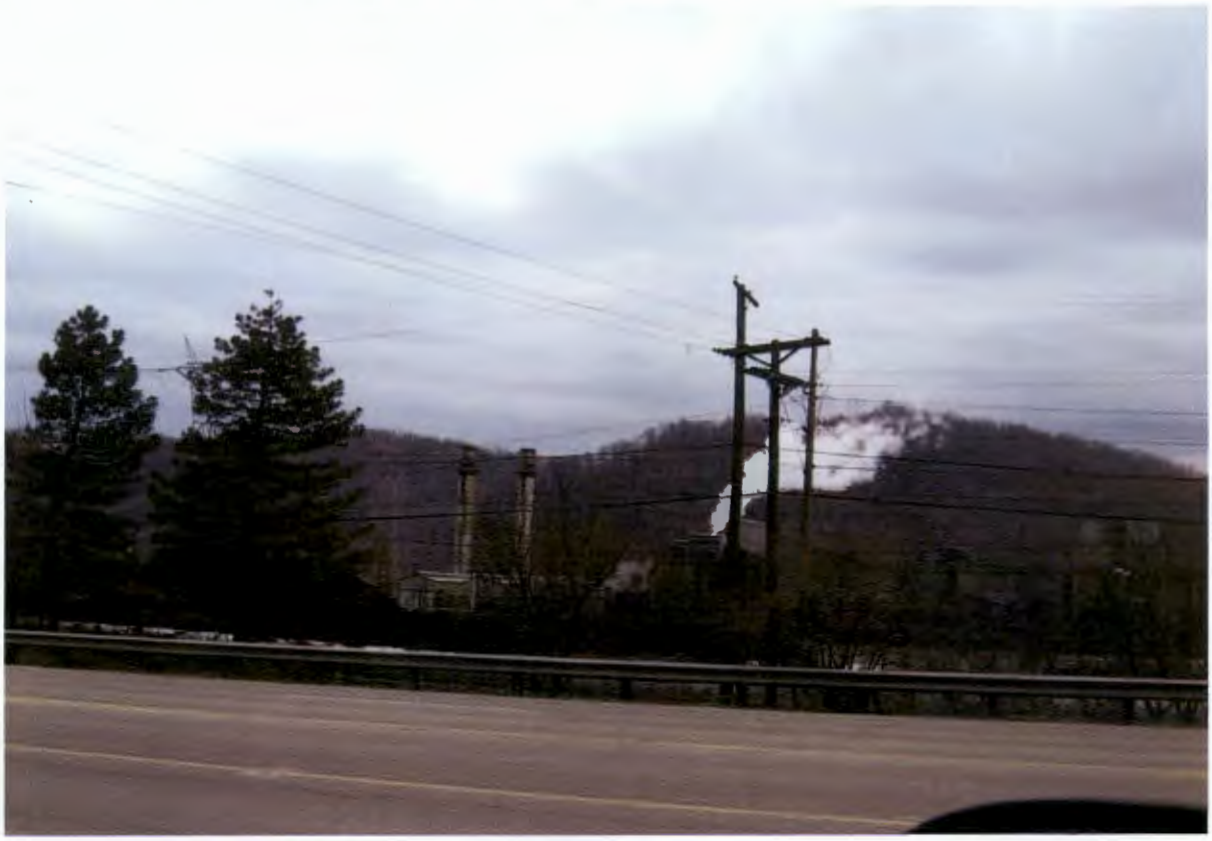
Appendix 5

2006 Site Reconnaissance Photographs

Photograph 1. View SW across Route 2 of coke plant.

Photograph 2. View SW across Route 2 at coke plant.

Photograph 3. View W from Route 2 toward coke plant.



Photograph 4. Looking SW toward coke plant.

Photograph 5. SW view of S part of coke plant and adjacent Mitchell Plant to S.

Photograph 6. Looking SW at Kammer Plant further to N.

Appendix 6

2006 HRS Package

****** CONFIDENTIAL ******
******PRE-DECISIONAL DOCUMENT ******
****** SUMMARY SCORESHEET ******
****** FOR COMPUTING PROJECTED HRS SCORE ******

****** Do Not Cite or Quote ******

Site Name: Venco Coke Fire ER Site

Region: 3

City, County, State: Moundsville, Marshall WV

Evaluator: GMH

EPA ID#: WVN000306095

Date: 8/18/2006

Lat/Long: 39.8345/80.8202

T/R/S:

Congressional District: Franklin

This Scoresheet is for: HRS Package

Scenario Name: Pre-CERCLIS Screening

Description: Raw petroleum coke fire discovered on 02/09/2004 and extinguished by 02/13/2004

	S pathway	S^2 pathway
Ground Water Migration Pathway Score (S_{gw})	0.1	0.01
Surface Water Migration Pathway Score (S_{sw})	0.12	0.0144
Soil Exposure Pathway Score (S_s)	0	0
Air Migration Score (S_a)	0.0305454545454545	0.000933024793388427
$S^2_{gw} + S^2_{sw} + S^2_s + S^2_a$		0.0253330247933884
$(S^2_{gw} + S^2_{sw} + S^2_s + S^2_a)/4$		0.00633325619834 71
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_s + S^2_a)/4}$		0.08

✳ Pathways not assigned a score (explain):

TABLE 3-1 --GROUND WATER MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Aquifer Evaluated: Quaternary Alluvium			
Likelihood of Release to an Aquifer:			
1. Observed Release	550	0	
2. Potential to Release:			
2a. Containment	10	9	
2b. Net Precipitation	10	3	
2c. Depth to Aquifer	5	3	
2d. Travel Time	35	25	
2e. Potential to Release [lines 2a(2b + 2c + 2d)]	500	279	
3. Likelihood of Release (higher of lines 1 and 2e)	550		279
Waste Characteristics:			
4. Toxicity/Mobility	(a)	2E-5	
5. Hazardous Waste Quantity	(a)	1	
6. Waste Characteristics	100		1
Targets:			
7. Nearest Well	(b)	20	
8. Population:			
8a. Level I Concentrations	(b)	0	
8b. Level II Concentrations	(b)	0	
8c. Potential Contamination	(b)	0.514	
8d. Population (lines 8a + 8b + 8c)	(b)	0.514	
9. Resources	5	5	
10. Wellhead Protection Area	20	5	
11. Targets (lines 7 + 8d + 9 + 10)	(b)		30.514
Ground Water Migration Score for an Aquifer:			
12. Aquifer Score [(lines 3 x 6 x 11)/82,5000][c]	100		0.1031928
Ground Water Migration Pathway Score:			
13. Pathway Score (S_{gw}), (highest value from line 12 for all aquifers evaluated)[c]	100		0.1031928

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 4-1 --SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Watershed Evaluated:			
Drinking Water Threat			
Likelihood of Release:			
1. Observed Release	550	0	
2. Potential to Release by Overland Flow:			
2a. Containment	10	9	
2b. Runoff	10	1	
2c. Distance to Surface Water	5	16	
2d. Potential to Release by Overland Flow [lines 2a(2b + 2c)]	35	153	
3.Potential to Release by Flood:			
3a. Containment (Flood)	10	0	
3b. Flood Frequency	50	7	
3c. Potential to Release by Flood (lines 3a x 3b)	500	0	
4. Potential to Release (lines 2d + 3c, subject to a maximum of 500)	500	153	
5. Likelihood of Release (higher of lines 1 and 4)	550		153
Waste Characteristics:			
6. Toxicity/Persistence	(a)	10000	
7. Hazardous Waste Quantity	(a)	1	
8. Waste Characteristics	100		10
Targets:			
9. Nearest Intake	50	0	
10. Population:			
10a. Level I Concentrations	(b)	0	
10b. Level II Concentrations	(b)	0	
10c. Potential Contamination	(b)	0	
10d. Population (lines 10a + 10b + 10c)	(b)	0	
11. Resources	5	5	
12. Targets (lines 9 + 10d + 11)	(b)		5
Drinking Water Threat Score:			
13. Drinking Water Threat Score [(lines 5x8x12)/82,500, subject to a max of 100]	100		0.09
Human Food Chain Threat			
Likelihood of Release:			
14. Likelihood of Release (same value as line 5)	550		153
Waste Characteristics:			
15. Toxicity/Persistence/Bioaccumulation	(a)	0	
16. Hazardous Waste Quantity	(a)	1	
17. Waste Characteristics	1000		0
Targets:			
18. Food Chain Individual	50	2	
19. Population			
19a. Level I Concentration	(b)	0	
19b. Level II Concentration	(b)	0	
19c. Potential Human Food Chain Contamination	(b)	0.3	
19d. Population (lines 19a + 19b + 19c)	(b)	0.3	
20. Targets (lines 18 + 19d)	(b)		2.3
Human Food Chain Threat Score:			
21. Human Food Chain Threat Score [(lines 14x17x20)/82500, subject to max of 100]	100		0
Environmental Threat			
Likelihood of Release:			
22. Likelihood of Release (same value as line 5)	550		153
Waste Characteristics:			
23. Ecosystem Toxicity/Persistence/Bioaccumulation	(a)	0	
24. Hazardous Waste Quantity	(a)	1	
25. Waste Characteristics	1000		0

Targets:			
26. Sensitive Environments			
26a. Level I Concentrations	(b)	0	
26b. Level II Concentrations	(b)	0	
26c. Potential Contamination	(b)	5	
26d. Sensitive Environments (lines 26a + 26b + 26c)	(b)	5	
27. Targets (value from line 26d)	(b)		5
Environmental Threat Score:			
28. Environmental Threat Score [(lines 22x25x27)/82,500 subject to a max of 60]	60		0
Surface Water Overland/Flood Migration Component Score for a Watershed			
29. Watershed Score[c] (lines 13+21+28, subject to a max of 100}	100		0.09
Surface Water Overland/Flood Migration Component Score			
30. Component Score (S_{sw})[c] (highest score from line 29 for all watersheds evaluated)	100		0.09

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 4-25 --GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Aquifer Evaluated:			
Drinking Water Threat			
Likelihood of Release to an Aquifer:			
1. Observed Release	550	0	
2. Potential to Release:			
2a. Containment	10	9	
2b. Net Precipitation	10	3	
2c. Depth to Aquifer	5	3	
2d. Travel Time	35	25	
2e. Potential to Release [lines 2a(2b + 2c + 2d)]	500	279	
3. Likelihood of Release (higher of lines 1 and 2e)	550		279
Waste Characteristics:			
4. Toxicity/Mobility	(a)	1	
5. Hazardous Waste Quantity	(a)	1	
6. Waste Characteristics	100		1
Targets:			
7. Nearest Well	(b)	0	
8. Population:			
8a. Level I Concentrations	(b)	0	
8b. Level II Concentrations	(b)	0	
8c. Potential Contamination	(b)	0	
8d. Population (lines 8a + 8b + 8c)	(b)	0	
9. Resources	5	5	
10. Targets (lines 7 + 8d + 9)	(b)	5	
Drinking Water Threat Score:			
11. Drinking Water Threat Score ([lines 3 x 6 x 10]/82,500, subject to max of 100)	100		0.02
Human Food Chain Threat			
Likelihood of Release:			
12. Likelihood of Release (same value as line 3)	550		279
Waste Characteristics:			
13. Toxicity/Mobility/Persistence/Bioaccumulation	(a)	50000	
14. Hazardous Waste Quantity	(a)	1	
15. Waste Characteristics	1000		10
Targets:			
16. Food Chain Individual	50		
17. Population			
17a. Level I Concentration	(b)	0	
17b. Level II Concentration	(b)	0	
17c. Potential Human Food Chain Contamination	(b)	0.3	
17d. Population (lines 17a + 17b + 17c)	(b)	0.3	
18. Targets (lines 16 + 17d)	(b)		2.3
Human Food Chain Threat Score:			
19. Human Food Chain Threat Score [(lines 12x15x18)/82,500,suject to max of 100]	100		0.077781818 1818182
Environmental Threat			
Likelihood of Release:			
20. Likelihood of Release (same value as line 3)	550		279
Waste Characteristics:			
21. Ecosystem Toxicity/Persistence/Bioaccumulation	(a)	1	
22. Hazardous Waste Quantity	(a)	1	
23. Waste Characteristics	1000		1
Targets:			
24. Sensitive Environments			
24a. Level I Concentrations	(b)	0	
24b. Level II Concentrations	(b)	0	

24c. Potential Contamination	(b)	5	
24d. Sensitive Environments (lines 24a + 24b + 24c)	(b)	5	
25. Targets (value from line 24d)	(b)		5
Environmental Threat Score:			
26. Environmental Threat Score [(lines 20x23x25)/82,500 subject to a max of 60]	60		0.02
Ground Water to Surface Water Migration Component Score for a Watershed			
27. Watershed Score[c] (lines 11 + 19 + 28, subject to a max of 100)	100		0.117781818181818
28. Component Score (S_{gs})[c] (highest score from line 27 for all watersheds evaluated, subject to a max of 100)	100		0.117781818181818

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 5-1 --SOIL EXPOSURE PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Likelihood of Exposure:			
1. Likelihood of Exposure	550		0
Waste Characteristics:			
2. Toxicity	(a)	10000	
3. Hazardous Waste Quantity	(a)	1	
4. Waste Characteristics	100		10
Targets:			
5. Resident Individual	50	0	
6. Resident Population:			
6a. Level I Concentrations	(b)	0	
6b. Level II Concentrations	(b)	0	
6c. Population (lines 6a + 6b)	(b)	0	
7. Workers	15	5	
8. Resources	5	0	
9. Terrestrial Sensitive Environments	(c)	0	
10. Targets (lines 5 + 6c + 7 + 8 + 9)	(b)		5
Resident Population Threat Score			
11. Resident Population Threat Score (lines 1 x 4 x 10)	(b)		0
Nearby Population Threat			
Likelihood of Exposure:			
12. Attractiveness/Accessibility	100	5	
13. Area of Contamination	100	5	
14. Likelihood of Exposure	500		5
Waste Characteristics:			
15. Toxicity	(a)	10000	
16. Hazardous Waste Quantity	(a)	1	
17. Waste Characteristics	100		10
Targets:			
18. Nearby Individual	1	0	
19. Population Within 1 Mile	(b)	0	
20. Targets (lines 18 + 19)	(b)		0
Nearby Population Threat Score			
21. Nearby Population Threat (lines 14 x 17 x 20)	(b)		0
Soil Exposure Pathway Score:			
22. Pathway Score[d] (S_s), [lines (11+21)/82,500, subject to max of 100]	100		0

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited to a maximum of 60
[d] Do not round to nearest integer

TABLE 6-1 --AIR MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Likelihood of Release:			
1. Observed Release	550	0	
2. Potential to Release:			
2a. Gas Potential to Release	500	280	
2b. Particulate Potential to Release	500	280	
2c. Potential to Release (higher of lines 2a and 2b)	500	280	
3. Likelihood of Release (higher of lines 1 and 2c)	550		280
Waste Characteristics:			
4. Toxicity/Mobility	(a)	200	
5. Hazardous Waste Quantity	(a)	1	
6. Waste Characteristics	100		3
Targets:			
7. Nearest Individual	50	0	
8. Population:			
8a. Level I Concentrations	(b)	0	
8b. Level II Concentrations	(b)	0	
8c. Potential Contamination	(c)	3	
8d. Population (lines 8a + 8b + 8c)	(b)	3	
9. Resources	5	0	
10. Sensitive Environments:			
10a. Actual Contamination	(c)	0	
10b. Potential Contamination	(c)	0	
10c. Sensitive Environments (lines 10a + 10b)	(c)	0	
11. Targets (lines 7 + 8d + 9 + 10c)	(b)		3
Air Migration Pathway Score:			
12. Pathway Score (S_a) [(lines 3 x 6 x 11)/82,500][d]	100		0.0305454545454545

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.
[d] Do not round to nearest integer